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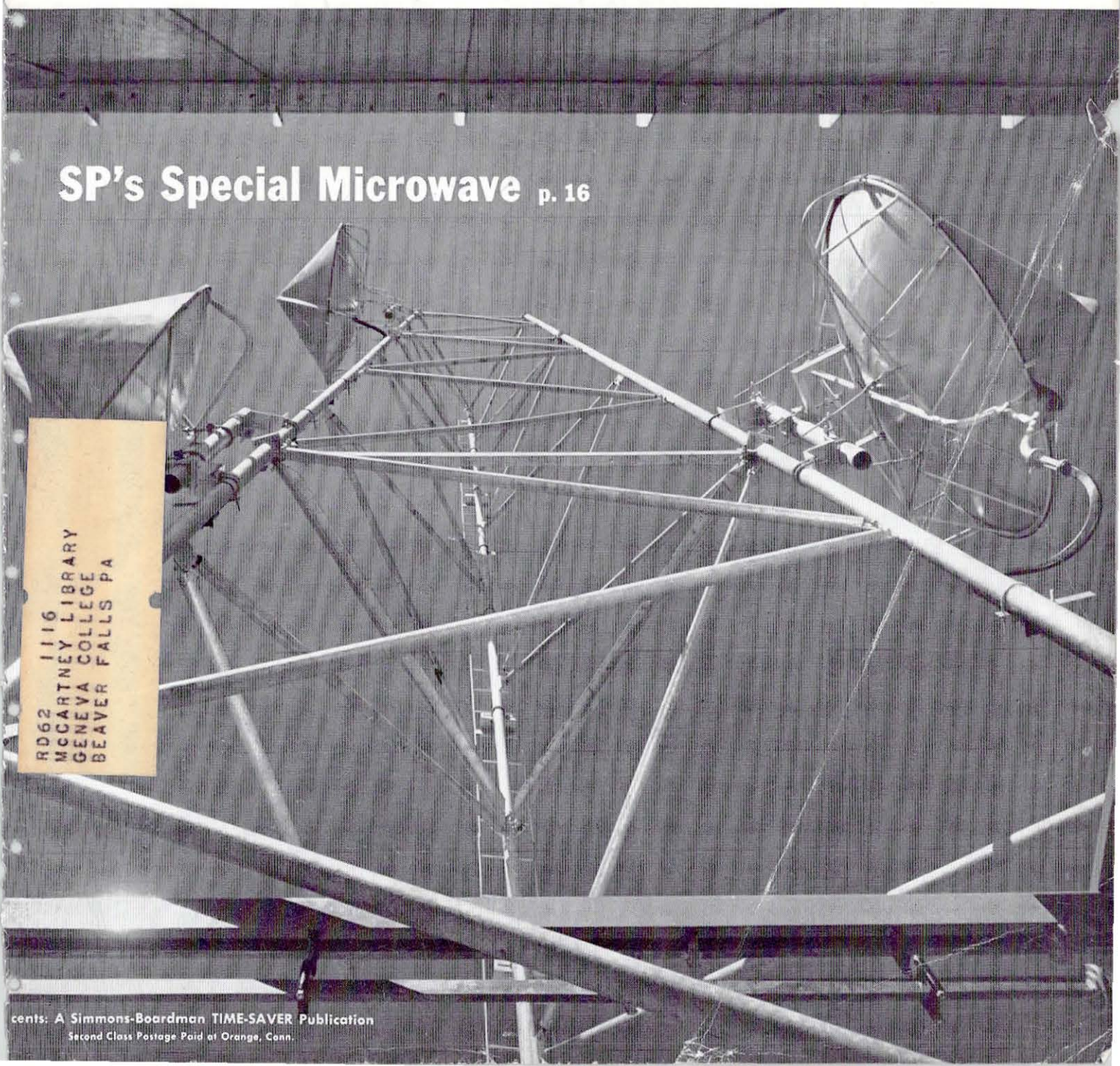
Long Island's engineers begin largest **construction** job in road's history . . . . . p. 22

September 10, 1962

RAILWAY AGE WEEKLY

SP's Special Microwave p. 16



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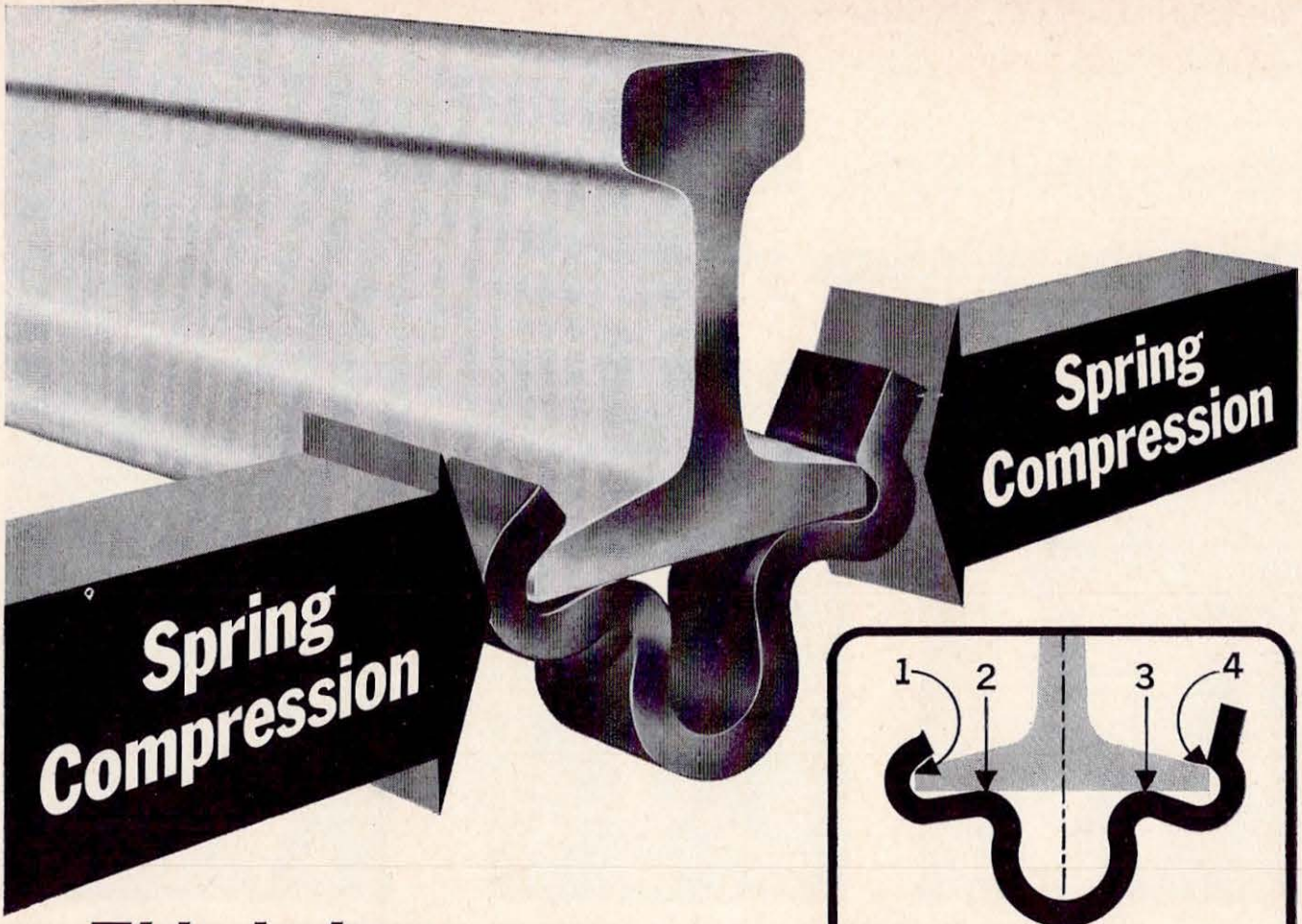

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"Railroads must mechanize to remain competitive,"

says Mr. E. Frederic Uhrbrock, Jr., Railroad Security Analyst, Bear, Stearns & Company.

"Full benefit of diesel operation cannot be realized without complete automation of yards and CTC installations. Modern tools are essential for profitable operation."

Portraits by Editta Sherman

"Big job of automation still remains for the railroads,"

says Mr. W. Wendell Reuss, Manager, Transportation Securities Department, W. E. Hutton & Company.

"The railroad industry introduced many concepts of automation which have now been accepted by other industries. It must continue to pioneer in the application of automation techniques if operating costs are to be reduced. New developments such as the integrated train, automatic train dispatching, automatic train operation, consolidation of CTC along with fully automatic yards . . . all offer the railroads great opportunities for cutting operating costs."

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says Mr. Arthur Jansen, Railroad Security Analyst, W. E. Burnet & Company.

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RAILWAY AGE

WEEK AT A GLANCE

September 10, 1962 • Vol. 153, No. 11

ORT, C&NW dig in for a long siege

With mediatory efforts showing no apparent progress, there were signs last week that this key battle for job security might be a long one .....p. 9

SP installs special microwave

The 270-mile system, through California's San Joaquin valley, is to be completed this month. The system will handle 60 voice channels and 30 teletypewriter channels p.16

CB&Q measures cars in motion

Delays normally incident to measuring high-wide loads have been minimized by a new device installed in the Burlington's Eola, Ill., yard p.19

Long Island begins huge construction job

Nearly $80 million worth of bridges and grade-crossing-elimination projects involving the road are to be built as part of plans for the forthcoming World's Fair p.22

WP uses 'super-cube' trailers

The new piggyback trailers, designed to handle refrigerator show cases, are suitable for any lading which requires a high degree of protection against damage p.35

Milwaukee rebuilds RPO cars

Two cars—which feature improvements in design, better lighting and 1,032 letter separations for sorting mail en route—are in service. Two more will be converted later p.37

Wabash U25B school is continuing project

Concentrated at the outset on operating and maintenance people, the school is designed to instruct personnel to operate and maintain the 2,500-hp GE diesel units p.42

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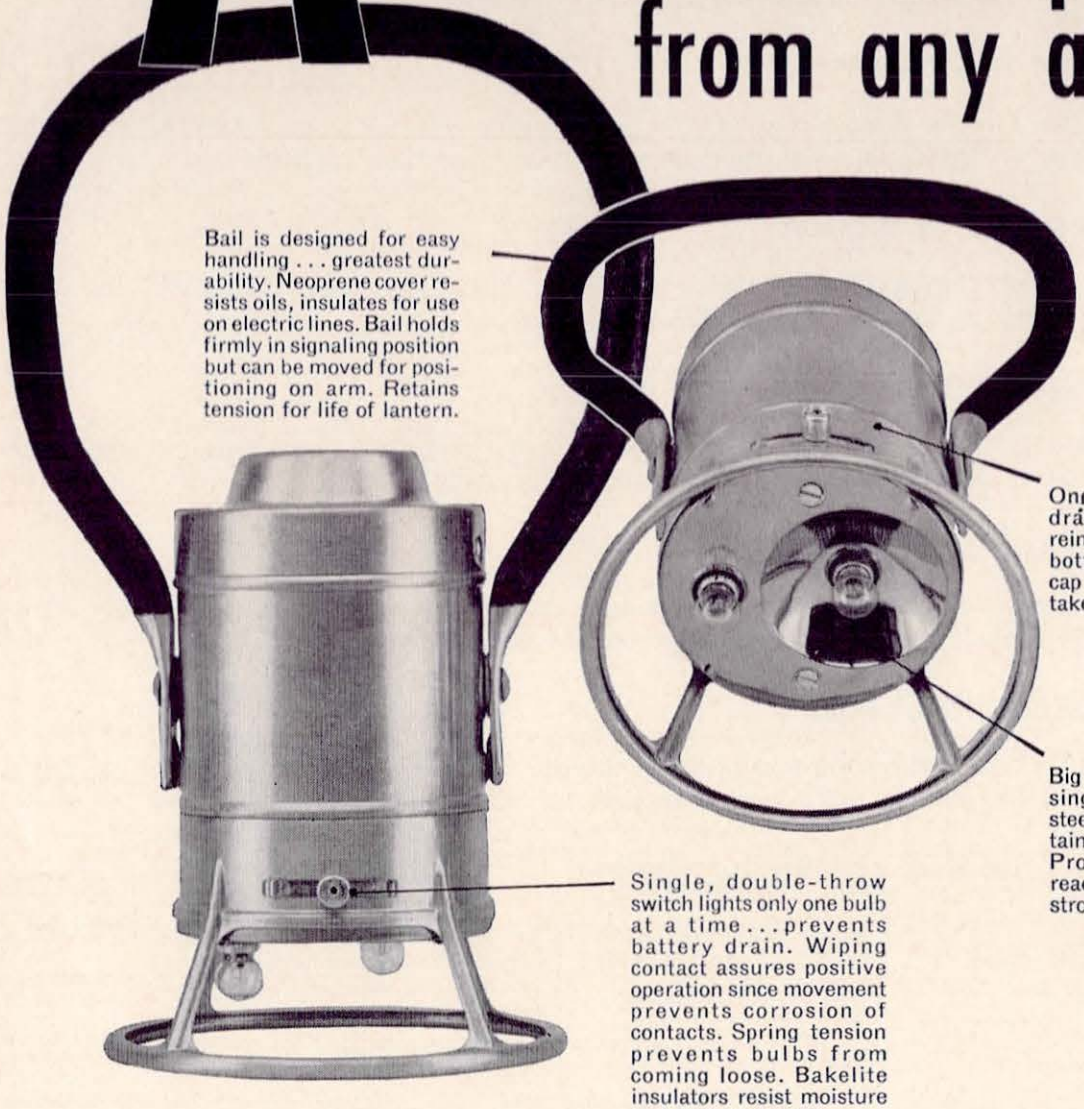

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WEEK AT A GLANCE

Interest runs high in TOFC probe

The ICC's piggybacking investigation has elicited statements from more than 50 interested parties, including some 25 railroads p.44

How L&N pushes its auto-TOFC traffic

To promote its mushrooming piggyback and autorack traffic, the L&N set up a system-wide sales organization to service that type of traffic exclusively p.46

The Action Page—Four hills to climb

Four goals for railroaders: Change operating employees' working rules; secure enactment of President Kennedy's transport program; mergers; clearer understanding of costs p.62

Short and Significant

Intercity truck tonnage . . .

in the week ended Aug. 25 was 0.6% below the year-ago figure—first time in more than a year that weekly highway tonnage has trailed volume of a year earlier.

James R. Hoffa's Teamsters Union . . .

claims that "nearly 1,000" members of the Brotherhood of Railway Clerks on the Southern Pacific have indicated they want to quit the BRC and join the Teamsters.

'Kennedy bills' . . .

to implement the President's transportation message will come up for hearing again this week before the Senate Commerce Committee. Water carriers will be heard.

Current Statistics

Operating revenues		
6 mos.,	1962	$4,703,650,132
6 mos.,	1961	4,417,470,000
Operating expenses		
6 mos.,	1962	3,713,490,394
6 mos.,	1961	3,594,534,970
Taxes		
6 mos.,	1962	531,960,577
6 mos.,	1961	482,452,262
Net railway operating income		
6 mos.,	1962	265,495,659
6 mos.,	1961	145,845,950
Net income estimated		
6 mos.,	1962	171,000,000
6 mos.,	1961	62,000,000
Carloadings revenue freight		
34 wks.,	1962	18,715,558
34 wks.,	1961	18,133,289
Freight cars on order		
Aug. 1,	1962	13,192
Aug. 1,	1961	10,644
Freight cars delivered		
7 mos.,	1962	23,165
7 mos.,	1961	20,011
Serviceable cars		
Aug. 1,	1962	1,444,431
Aug. 1,	1961	1,476,781
Cars awaiting repairs		
Aug. 1,	1962	132,811
Aug. 1,	1961	151,500

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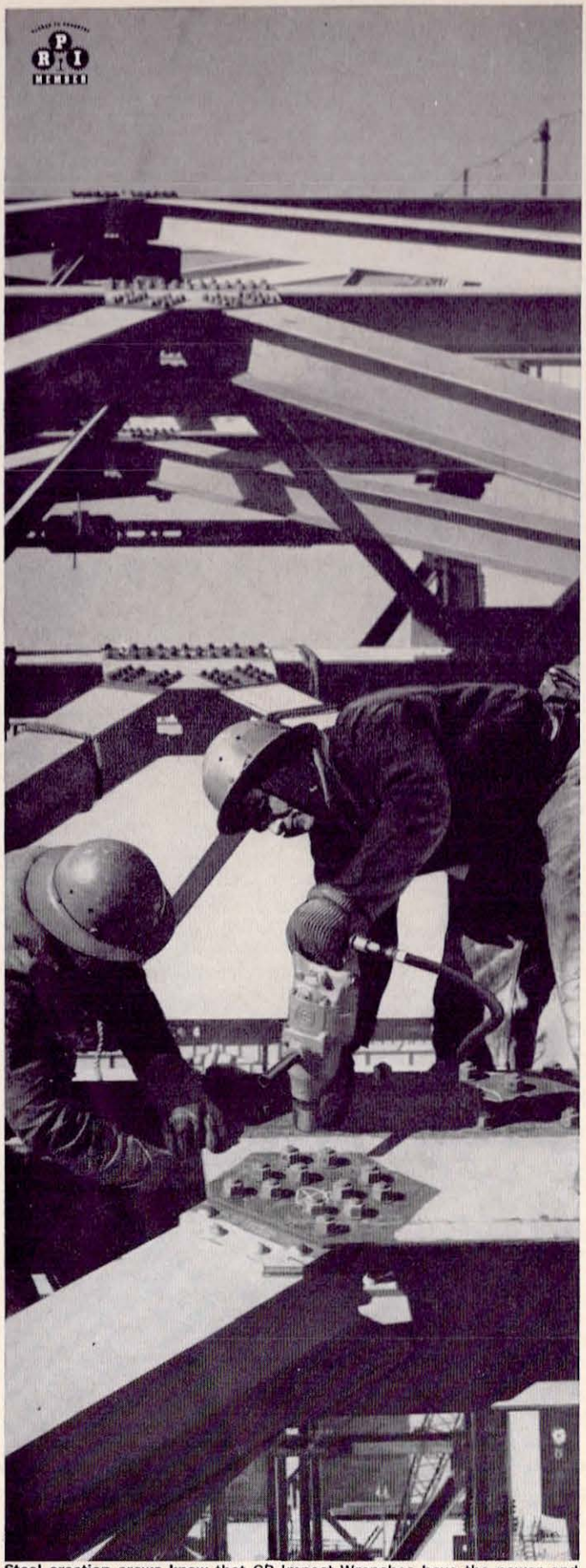

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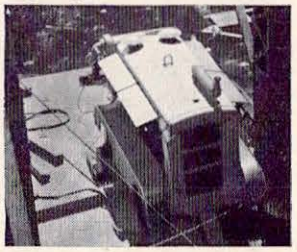

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Striking It Rich

Striking members of the Order of Railroad Telegraphers (and other C&NW employees idled because of the ORT walkout) can soon start collecting $51 per week—their take in carrier-financed railroad unemployment insurance benefits.

North Western has about 1,000 ORT members. Together, they'll draw $51,000 from the unemployment insurance fund for each week the strike lasts.

In all, the walkout has idled about 16,000 persons. At $51 per week, that represents a weekly drain of more than $800,000 on the hard-pressed RUIA account.

Strikers—and others—can collect benefits for a minimum 26 weeks, if the walkout should last that long. Beyond that, employees with more than 10 years seniority could go to 39 weeks; those with more than 15 years seniority could go a full year.

Under the law, benefits are computed from the start of the strike, though no actual payments are made for two weeks. Claimants must register, and re-register weekly so long as they're idled.

By one estimate, the North Western strike could cost the RUIA account $1 million per week—if the walkout continues and if it leads to layoffs on roads dependent on C&NW for a large interchange volume.

By comparison, the New York harbor strike last year also cost the account $1 million per week. The TWU strike against the Pennsylvania cost $5.5 million before it ended.

In this respect, the Railroad Unemployment Insurance Act comes close to being a unique document. Benefits are provided solely through employer contributions — and, unlike virtually every other federal or state law or supplemental benefit plan, there's no restriction whatsoever to prevent payment of benefits to strikers engaged in a "legal" work stoppage.

ORT, C&NW Dig in For a Long Siege

► **The Story at a Glance: The C&NW-ORT strike settled down into a Maginot Line-Siegfried Line sort of thing last week, with both sides firing from fixed positions. Mediatory efforts didn't show obvious progress. Both railroad and union seemed to be prepared for a long siege. It was, at least, a peaceful strike situation. North Western shut down its rail operations. Pickets had very little to picket.**

The first big railroad strike of 1962 left more than 30,000 Chicago suburbanites and hundreds of midwestern shippers with little to celebrate over Labor Day.

The commuters—many of whom stretched the weekend into a five-day holiday when the Telegraphers struck Chicago & North Western Thursday, Aug. 30—awoke Tuesday morning, Sept. 4, to find C&NW still shut down. Some turned to other railroads—Burlington, Milwaukee, the ailing Chicago North Shore & Milwaukee—and the Chicago Transit Authority. Others made use of suburban bus lines which added extra runs. Most, apparently, descended (at the usual average of 1.6 persons per auto) on the expressways serving the city's west and northwest suburbs.

Even the suburbanites who switched to other railroads, however, had their difficulties. Most had to drive from home to a distant station—to find that they still had blocks to walk from the nearest available parking space.

Shippers—particularly those served exclusively by North Western—had more than inconvenience to worry about. Many Wisconsin towns were without rail service; a number of paper mills in the area were faced with shutdowns either because they were running out of raw materials or because they had no place to store their finished product.

Francis A. O'Neill, Jr., of the National Mediation Board, had the parties together several times between the start of the walkout and Labor Day. But there was little indication that progress was being made—except perhaps on side issues—and by Tuesday, Sept. 4, joint sessions had been discontinued and Mr. O'Neill was setting up separate meetings with union and management negotiators.

C&NW Chairman Ben W. Heineman was less than optimistic about chances for an early settlement. Talks broke down quickly, he indicated, once the subject of the ORT's job freeze demand came up. North Western, he was quoted as saying, would fight the freeze as long as necessary—months, if need be. As Mr. Heineman viewed it, the principle—as it affected the whole railroad industry, as well as C&NW—was too great to back down from.

The ORT, meanwhile, hinted it might be willing to talk in terms of the recent Southern Pacific settlement—in which the railroad agreed to limit telegrapher force reductions to 2% per year.

This, however, was not what the ORT-C&NW emergency board recommended (nor was it in line with the findings of an ORT-New York Central board reporting more recently). Both emergency boards recommended that the union drop its job freeze demand and that the parties negotiate protection factors for displaced employees.

The Telegraphers, too, seemed to regard this strike as one of significance far beyond the limits of North Western's 10,500 miles of line. Efforts were apparently being made to insure that all unions were lined up with the ORT—and would stay that way in the event some attempt might be made to operate the property while the strike continued. Particularly among the non-ops, the tendency seemed to be to regard the Telegraphers' walkout as the key battle in the whole job-stabilization war.

As North Western employees put in their seventh day of idleness last Wednesday, ORT president George E. Leighty met with the general chairmen of all crafts represented on C&NW to tell them that "we have a hard fight

WATCHING WASHINGTON WITH WALTER TAFT

• **THE WIDE RANGES** of revenues per ton-mile are pointed up again in the latest compilation of freight traffic and revenue averages which has been issued by the ICC's Bureau of Transport Economics and Statistics. The compilation, the Bureau's Statement MS-1, took its figures from the one-per-cent waybill sample submitted by the railroads for 1961.

IT SHOWS, for all carload traffic, an average revenue per ton-mile of 1.67 cents. This is the composite of commodity-group averages which range from a high of 2.69 cents for Forwarder Traffic to 1.17 cents for Products of Mines. Averages for the other four groups are: Products of Agriculture, 1.63 cents; Animals and Products, 2.67 cents; Products of Forests, 1.32 cents; Manufactures and Miscellaneous, 2.14 cents.

WITHIN THESE COMMODITY GROUPS, there are other wide ranges by commodity classes. They are: Products of Agriculture, from 4.3 cents on Fresh Bananas to 1.03 cents on Corn Meal; Animals and Products, from 4.05 cents on Wool and Mohair, NOS, to 1.97 cents on Sea Food, NOS; Products of Mines, from 0.68 cents on Aluminum Ore to 2.19 cents on Finished Stone, NOS; Products of Forests, from 2.23 cents on Railroad Ties to 1.18 cents on Plywood Veneer; Manufactures and Miscellaneous, from 6.98 cents on Airplanes and Parts to 1.14 cents on Common Brick.

ALSO SHOWN are average revenues per 100 lb, per car and per car-mile. These, in turn, are 36 cents, $302 and 54 cents for Products of Agriculture; $1.15, $385 and 43 cents for Animals and Products; 14 cents, $175 and 71 cents for Products of Mines; 37 cents, $292 and 43 cents for Products of Forests; 56 cents, $373 and 64 cents for Manufactures and Miscellaneous; $1.69, $419 and 33 cents for Forwarder Traffic. The averages for all commodities are 31 cents, $282 and 60 cents.

• **LONGEST ICC HEARING** ended Aug. 29. It was in the case involving Southern's proposal to offer reduced rates for multiple-car shipments of grain in its "Big John" cars. "Longest" means in practically continuous session since the opening last Jan. 8.

THE HEARING ran for 30 weeks in Washington and Kansas City, the only recess having been caused by an illness of Southern's counsel, John F. Donelan. The record includes 15,800 pages of transcript and 765 exhibits. The examiner is W. W. Peck.

MEANWHILE, Southern's undertaking to make the reduced rates available to its customers has been thwarted by the ICC and the courts. Originally published to become effective more than a year ago, the rates were suspended by the Commission. When the Commission's suspension power ran out, protesting water carriers won a further stay from the courts (RA, Aug. 27, p. 54).

• **NEW LAW** authorizes motor carriers to establish through routes and joint rates with water carriers for shipments to and from Alaska and Hawaii and the other states. It is Public Law 87-595.

SENATOR BARTLETT of Alaska anticipates that it "will permit lower freight rates both to Alaska and Hawaii." That's what he told his Senate colleagues. He also pointed out that railroads already had authority to enter joint-rate and through-route arrangements with water carriers for shipments to and from the new off-shore states.

and we need the cooperation of each of you." One general chairman, in declaring his full support of ORT's stand, called the C&NW shutdown the "culmination of the featherbed fight." Urging unity among labor ranks in a "fight to the finish," he said that this is what all the emergency board reports have been leading up to and he declared that this dispute is not just the Telegraphers' fight but the fight of all railroad labor.

Meanwhile, both North Western and the ORT showed little enthusiasm for airing the dispute publicly, so long as mediatory efforts were continuing. The few comments coming from either side were mainly re-statements of basic positions.

Side isues kept cropping up, as the negotiations crept along under Mediator O'Neill's prodding.

The Telegraphers indicated they wouldn't strike the Minneapolis & St. Louis, which C&NW purchased two years ago. But the former M&StL lines were shut down along with the rest of the 10,500-mile North Western system when the strike began. North Western said the M&StL property was an integrated part of C&NW and couldn't be operated separately; union spokesmen charged a lockout.

North Western's status under the railroads' strike insurance agreement also came in for inspection. C&NW spokesmen declined comment on whether the road is covered by the pact, which provides an indemnity for fixed expenses, including taxes, interest due on loans, equipment rental costs, salaries of non-striking employees and property protection costs.

(The insurance agreement is the subject of a $10 million damage suit filed by the Brotherhood of Railroad Trainmen against the Long Island and others after a BRT strike against the LIRR in 1960. The case has been heard in Federal District Court for the Southern District of New York, but no decision has been handed down. According to exhibits in the trial record, C&NW's daily indemnity —as of Jan. 15, 1960—was $150,000 and M&StL's was $10,050. The BRT suit charges that the insurance arrangement, worked out with a Nassau, Bahamas, company, constitutes a "conspiracy" in violation of the Railway Labor Act and Interstate Commerce Act.)

So far as the public was concerned in the Chicago area, most of the attention was being focused on the plight of North Western's 36,000 daily short-haul riders. With the help of other railroads and the CTA, however, and despite the bogging down of the "ex-

(*Continued on page 56*)

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RAILROADING AFTER HOURS WITH JIM LYNE

CHANGE IS DISTASTEFUL—Many railroad employees, I've noticed—including the great majority who put in a full day's useful work for their wages—seem to have the mistaken notion that practically all railroaders stand accused, in the working rules controversy, of uselessness or laziness. This surely isn't so, and I just don't get it.

Maybe this emotional misunderstanding arises from the word "feather-bedding." It is a colorful term all right but, to me, not very specific. It seems to have developed overtones, suggesting to some people's minds that employees in cushy jobs deliberately sought these conditions.

My observation is, rather, that outdated working rules are evidence, not so much of predatory instincts, as of people's stubborn resistance to change of whatever kind — for good or bad. You even hear of prisoners who refuse to leave jail when their terms expire. And oldsters sometimes try to carry on as they did in their younger days — although seldom with entire success. A "day" equal to 100 miles, the way it was in 1929, is mighty attractive to those who have it. There are lots of other things also that would be pleasant to have on the 1929 basis, but there's no union to enforce all such yearnings.

SUPPOSE RAILROADS WERE NEW—In thinking of railroading, as it ought to be if fully adjusted to modern conditions, I always try to imagine how we would be railroading if the industry were just getting started today. You can't quickly adjust an old institution to present-day conditions, of course — but you can at least imagine it, as a goal to aim at.

One thing I feel sure of, if we were starting out anew, is that we would not assign employees to jobs on rigid craft lines, as they are assigned today. Nor would employees or their unions (any more than managements) want to set up seniority on a division basis, as it is in most places today. As I understand it, the dispatchers often if not usually have system-wide seniority rosters. If it's good for them, why wouldn't it be for other jobs? The idea of a fellow's having to be chained down to one little area for his right to a job always struck me as inexplicable.

If readers have any ideas of the way we'd probably be doing things if we had a fresh start, I'd be glad to pass them along.

WORKING RULES MISUNDERSTOOD—There is certainly plenty of public misunderstanding about the operating working rules. A Savannah, Ga., lady recently had a letter in the Christian Science Monitor telling how a train she was riding was saved from accident by the "fireman," who took over when the engineman died suddenly. As the Monitor pointed out, railroads have not proposed to remove the "fireman" from passenger locomotives. Even if there were only one man in the cab, a "dead-man control" would have prevented the accident that this lady believed the "fireman" forestalled.

GOOD NEWS FOR KHRUSHCHEV—There is a great big study by the New York Regional Plan Association just out, telling what is going to happen to the distribution of population in the area in the next 25 years, unless corrective measures are taken. The "core" part is going to lose a half-million people and the "exurban" area will add six millions—spread out so haphazardly that a population increase of 38% will require a 78% increase in automobiles (with more highways to match, of course).

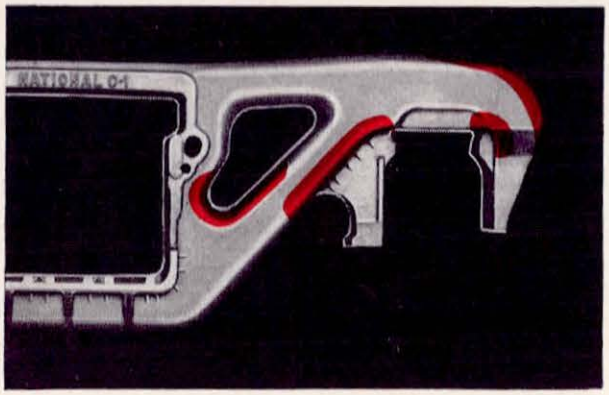
PAID FOR CAUSING TROUBLE—It takes a man in orbit to amaze some people, but I get amazed at simpler things, much closer home. And one of the things that amazes me most is the North Western strike. Here are a thousand men walking off the job, refusing to accept the findings of an emergency board—which is the machinery provided by the law that is supposed to resolve these controversies.

Meantime, government not only exerts no moral pressure in behalf of its own emergency board—but, so far, it seems content to sit by and see the strikers draw unemployment compensation, as a reward for staying off the job. Not only that, but it also seems satisfied to see thousands of other employees stay away from work in respect to picket lines. And, they tell me, these picket-shy fellows are putting in for unemployment pay too.

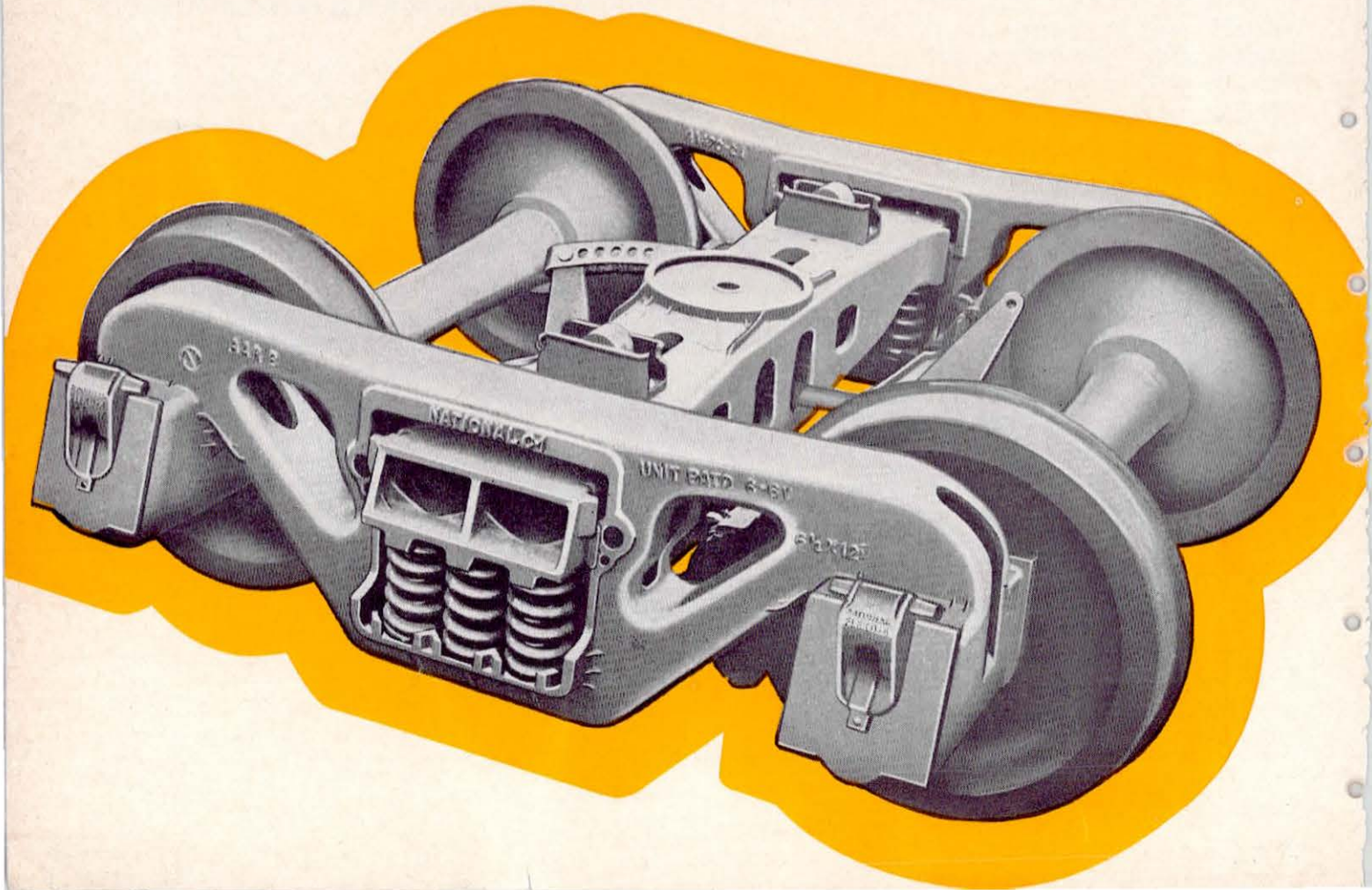
New 6½ x 12 Heavy Duty

NATIONAL

feature stronger tension



Color overlays show strengthened areas. Strengthening has been accomplished by redistributing metal so that over-all frame weight remains unchanged. New tension member design, of inverted "U" section at lower part and conventional "U" at upper part, reduces stresses 28% at lower part and 20% in upper part compared with conventional sections of same size. More even stress distribution throughout whole frame is feature of new design.



C-I TRUCKS

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Plus...

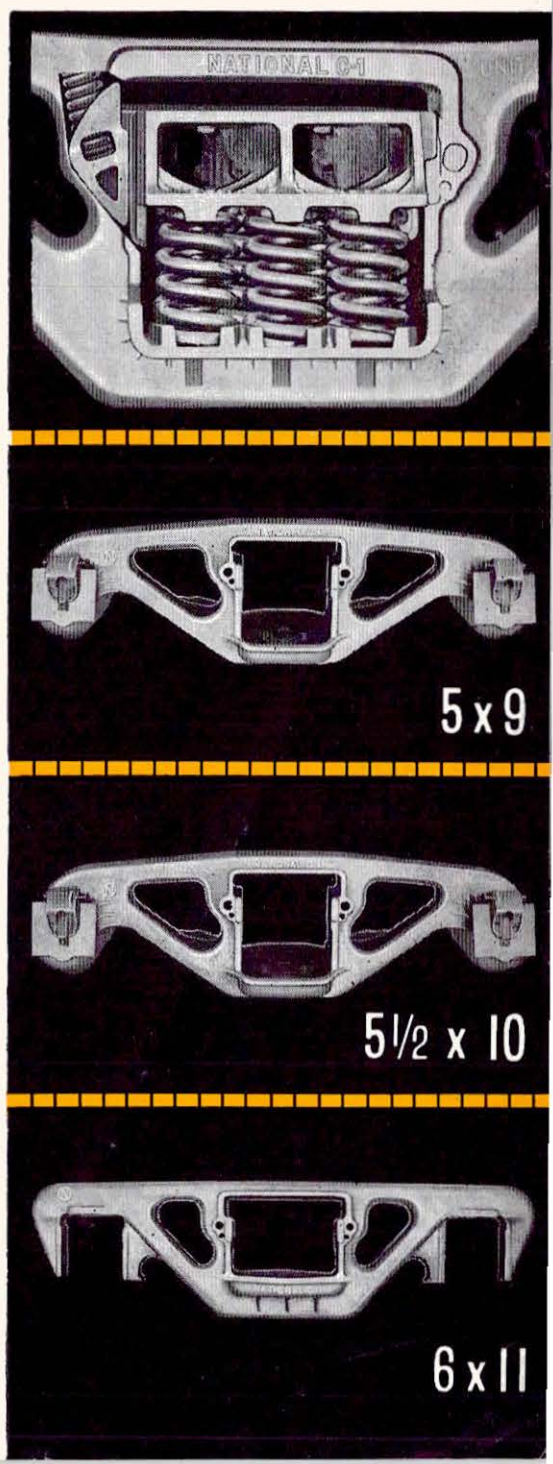
Service-Proven C-I Snubbing Mechanism Gives Smoothest Ride at lowest Maintenance

■ The new 6½ x 12 truck is the top of the C-1 Truck line — the most desirable heavy-duty freight truck in production. Through a scientific approach to the problem of metal redistribution, it has greater strength without any increase in over-all frame weight . . . has an even stress distribution that shrugs off high impact forces.

■ Equally important, the 6½ x 12 C-1 shares with other trucks in the National C-1 family, the exclusive C-1 design vertical shock snubbing mechanism — the only friction snubbing mechanism service-proven to have been right — right from the start.

■ No matter which National Truck you pick, you get these important C-1 Truck advantages: Smooth ride . . . longer wear life . . . proven maintenance economy of less than 5 cents per C-1 Truck in service over a 14-year period. *Or, to put it another way, about one-third of a cent per C-1 Truck per year for maintenance!*

A-7052A



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Today, one rail test service stands out . . . for its ability to detect more known types of defects . . . for lowest cost per defect . . . for years of experience . . . and for assurance in the reduction of costly service failures. That one is Sperry.

Only Sperry, through continued research in the development of equipment and techniques, combines the advantages of both the induction and ultrasonic methods. Significant economies are effected through this combination in the simultaneous testing of the entire rail including the joint bar area.

The score for 1961: Of the approximately 60,000 defective rails detected by Sperry Rail Service last year (an average of 50 per 100 miles tested), almost half were located by ultrasonic equipment.

Sperry . . . "first in rail testing" . . . invites comparisons of its ability, knowing that no other rail service can match it for accuracy and thoroughness. Sperry Rail Service, Shelter Rock Road, Danbury, Connecticut. (203) PIoneer 8-9243.

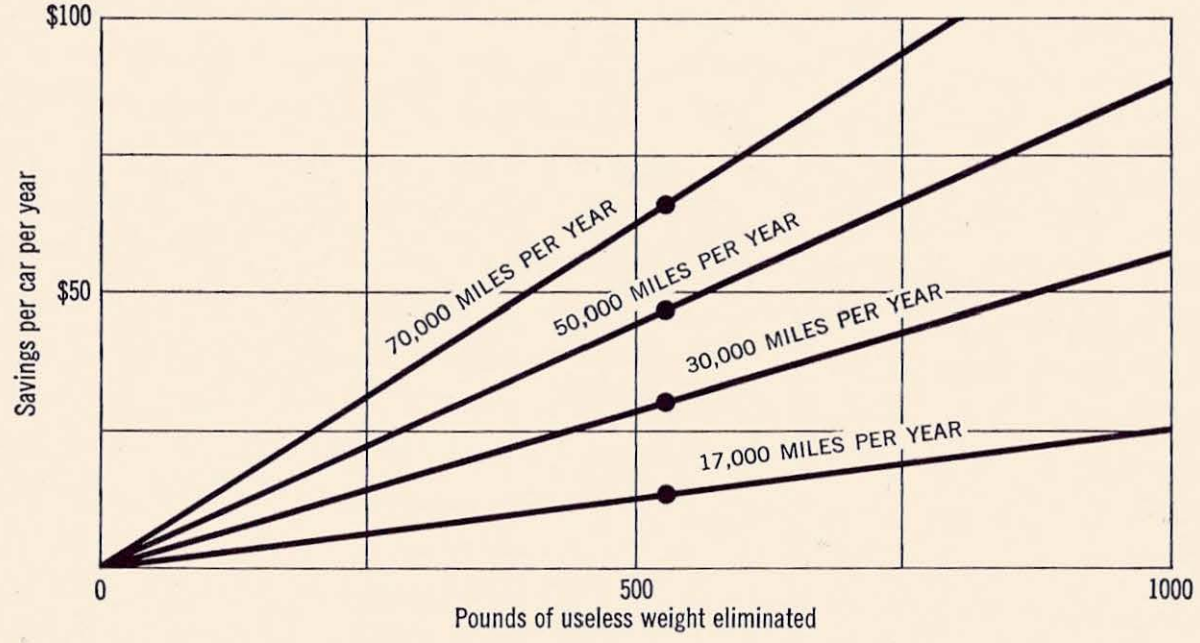
HOWE SOUND

Plan to visit our suite in the Conrad Hilton Hotel at the forthcoming Roadmasters' Convention.

SPERRY RAIL SERVICE
A DIVISION OF HOWE SOUND COMPANY

WHY YOU SHOULD BUY WROUGHT STEEL WHEELS

Graph shows quickly your savings in OUT-OF-POCKET costs



Your out-of-pocket costs of hauling *useless* dead weight can add up to thousands of wasted dollars in a year's time.

But wrought steel wheels are lighter by 560 pounds per carset (average for 50-ton freight car) than wheels made by another method.

Therefore, if a car averages 70,000 miles a year, wrought steel wheels save you $67.96 on out-of-pocket costs.

Now you can figure your savings on all your cars based on their average annual mileage.

You can *save* thousands simply by using lighter-weight wrought steel wheels. You eliminate unnecessary dead weight. You can put this 560 pounds into payload or other useful specialties.

Discuss this further with your Edgewater representative, or write direct.

Data from I.C.C. "Railroad Carload Cost Scales."—Statement 3-61, Dec. 1961, Box Cars.

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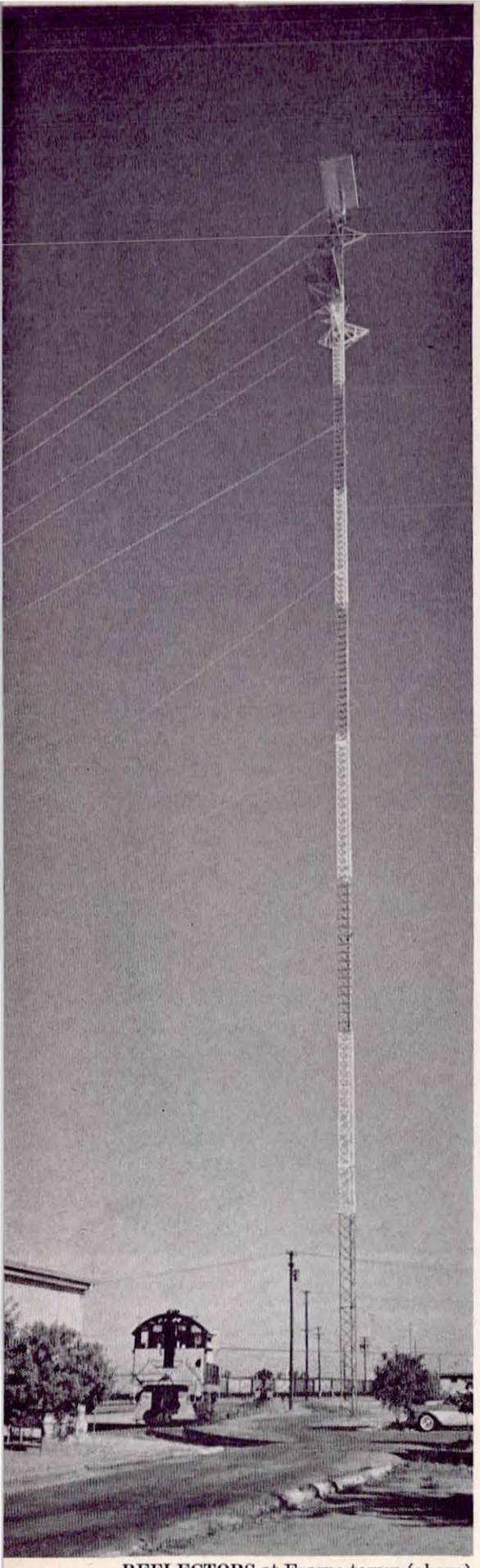
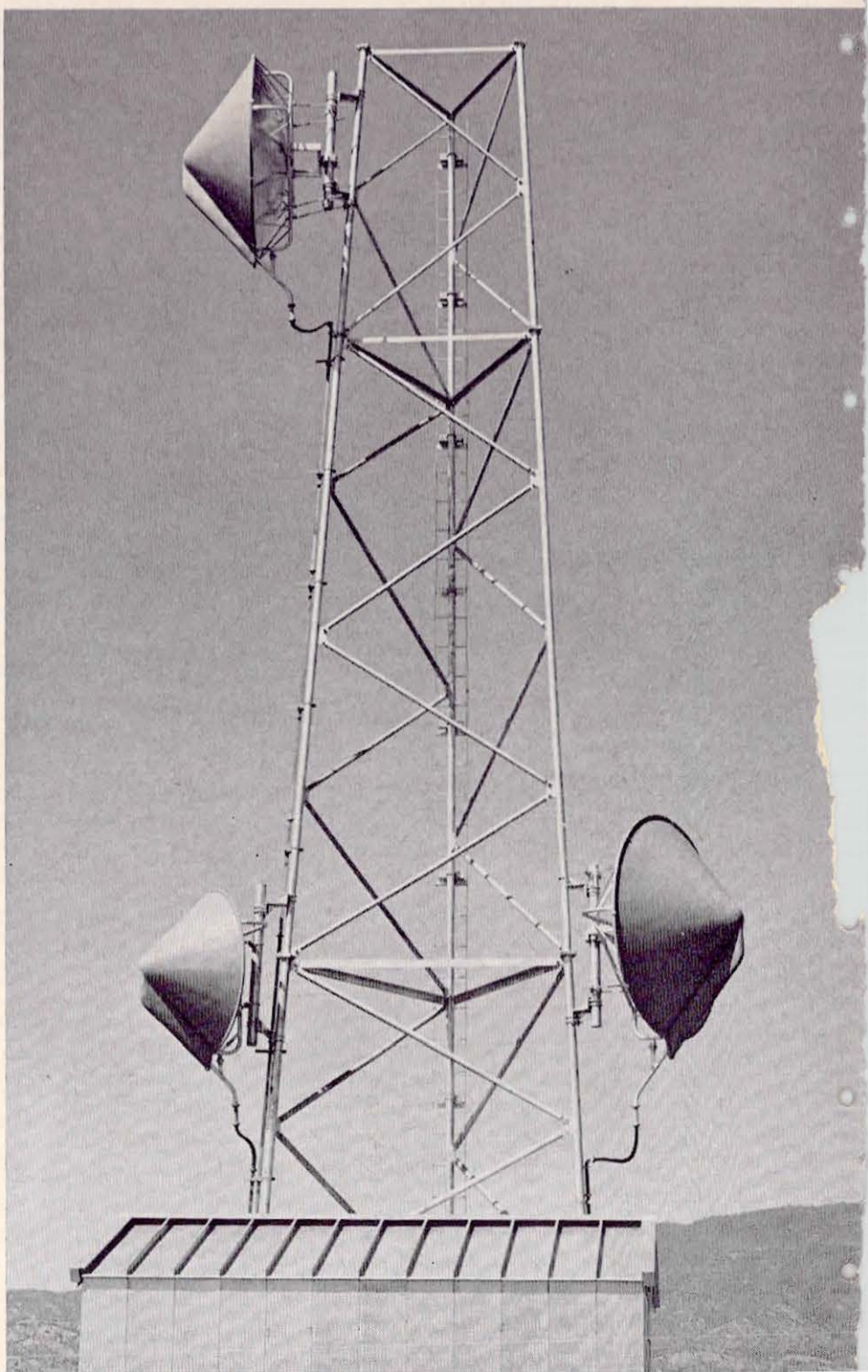
SP Installs Special

► **The Story at a Glance: Southern Pacific's microwave system through California's San Joaquin valley will achieve a 99.99% reliability — equivalent to only 53 minutes of outage per year. This high reliability is achieved through use of hot standby (dual transmitters and receivers in operation at all times) and space diversity (two receiving antennas about 30 ft apart on the tower). The 270-mile microwave system will handle 60 voice channels and 30 teletypewriter channels.**

When the Southern Pacific began planning its new Los Angeles-to-Fresno microwave system, scheduled to be completed this month, propagation problems were anticipated on that portion of the system in California's San Joaquin valley. Atmospheric conditions in the fertile, irrigated agricultural valley from Bakersfield north to Fresno had to be considered, particularly those conditions prevailing at certain hours of the day. Dawn and dusk are the most difficult times for transmission.





REFLECTORS at Fresno tower (above) are separated for space diversity. At Pampa Peak, southeast of Bakersfield, microwave system (right) drops into San Joaquin valley on two paths.

Microwave in San Joaquin Valley

"If we didn't have to transmit at dawn and dusk, we probably wouldn't have had a problem," says J. N. Albertson, general superintendent communications, system. "The air is generally still at those hours — there are many columns and layers of air with different temperatures and amounts of humidity." This type of atmosphere, called "marbling," is a cause of signal fading, because it refracts the microwaves.

In addition to propagation problems, SP also had to consider the possibility of equipment failures, and out-of-service conditions caused by periodic maintenance. Even though the microwave system offered circuit capability equal to at least 18 pairs of 150-kc transposed wire for remote control operations and data transmission, the big question was: How can we get protection from nearly all causes of transmission failure?

"Our planning called for hot standby [dual transmitters and receivers in operation at all times] from Los Angeles to Fresno to insure continuous operation of the initial system of more than 60 voice channels and 30 Teletype and telemetering channels, even through maintenance periods," says Mr. Albertson.

But this still left the more probable problem of microwave fading in the San Joaquin valley, so, the decision was made to also employ the space diversity method of path protection from Fresno to Famoso, just north of Bakersfield.

In a typical space diversity system, the signal from a single transmitter is received at two antennas and fed into a combiner. The type 74B combiner, under most conditions, will provide a 3-db increase in the signal-to-noise ratio over that obtained with a single receiver. If either signal fades below normal good performance and noise increases, the unaffected receiver provides the signal as the sub-standard signal is muted.

It is believed that the SP's is the first 6,000-mc space diversity system to be used by a railroad for protection from fading. Supplying equipment for this system is the Lenkurt Electric Co., Inc.

Protection from fading is necessary because only in a vacuum do microwaves travel at the speed of light. (The density of the atmosphere lessens the velocity of radio waves.) During "normal" atmospheric conditions the microwave beam bends slightly to follow the curvature of the earth, thereby extending the radio "horizon" beyond the optical horizon.

Normal atmospheric conditions, however, generally occur only when the air is moving, with consequently few horizontal layers and vertical columns of air characterized by great temperature and humidity fluctuations.

When normal conditions do not exist, on the other hand, two general types of fading can be expected to occur separately or simultaneously in variable proportions. They are inverse beam bending or "ducting," and multipath fading.

Inverse beam bending occurs when there is a temperature or humidity inversion. Instead of becoming rarer with altitude, the atmosphere becomes more dense. The signal, instead of following the curvature of the earth, may then be trapped within the atmospheric duct and pass above the receiving antenna.

Multipath fading is more common than inverse beam bending. It can be caused by the refraction of the signal by the atmosphere, or the reflection of the signal from the surface of the earth or water. This results in many propagation paths of varying lengths between the transmitter and receiver, and the consequent fading, because the signals arrive at the receiver out of phase and therefore tend to cancel each other.

Fading common in valley

Most physical and atmospheric conditions known to cause fading are common in the San Joaquin valley, where a web of irrigation canals laces the valley into an agricultural network. Frequently the air is still during the night and at dawn. Daytime temperatures are high — often more than 100 deg F — followed by nocturnal cooling of the soil. Heavy, moisture-laden air collects close to the ground, and humidity increases to 100% to produce ground fog.

The SP has microwave terminals at Los Angeles, Lancaster, Bakersfield, and Fresno. Relayed by 11 repeater stations along a 270-mile stretch of tracks, the system starts in Los Angeles and skirts the San Gabriel mountains. After crossing the Tehachapi range at more than 5,000 ft, the system drops down into the San Joaquin valley on two paths from 2,600-ft Pampa Peak, southeast of Bakersfield. One path is 15.2 miles into Bakersfield, while the second path is 32 miles into Famoso. From Famoso it is a 32.4-mile hop north to Tipton; 28.8 miles from Tipton to Traver; and 29.8 miles from Traver on in to Fresno.

Space diversity is being installed at Fresno, Traver, Tipton, and Famoso, on 91 miles of the five-hop link to Bakersfield. Tower heights at Fresno and Traver are 340 ft, at Tipton, 300 ft, and at Famoso, 270 ft. The reflectors in the space diversity system have a vertical separation of about 30 ft, thereby taking advantage of the fact that simultaneous fading is not likely over two well-separated paths.

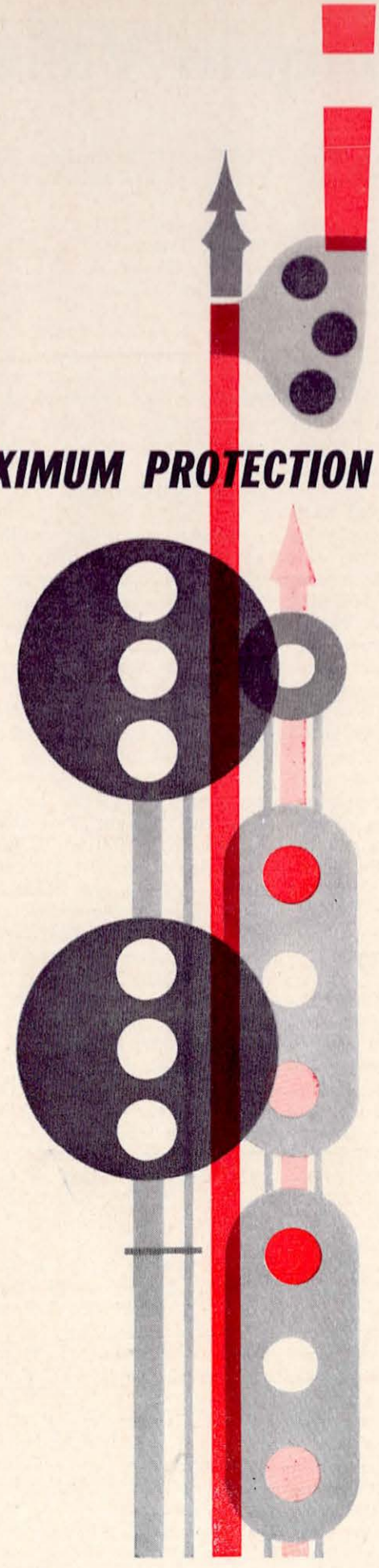
Dual transmitters

Because of the hot standby feature of the SP system, two transmitters, rather than one, and two receivers are coupled to common antennas at each terminal. Both transmitters are operating continuously on the same frequency, but the output of only one is passing through the antenna.

In case of equipment failure, the transmitters are switched electronically by means of an isolator in just one to one-and-one-half milliseconds. This delay cannot be detected on voice channels, and does not affect teletypewriter signals up to 100 words per minute. Switching manually for maintenance is accomplished in one millisecond.

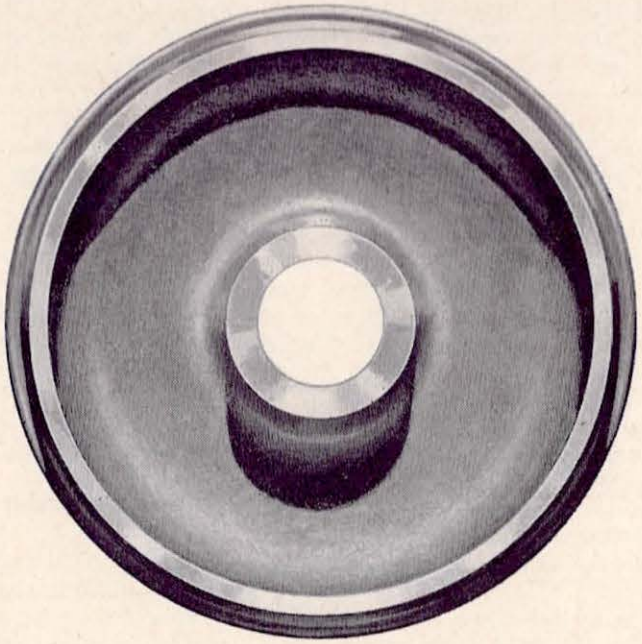
Southern Pacific technicians will be able to make electrical checks of the entire out-of-service transmitter or receiver without interrupting the in-service unit. The wave guide hybrid, used to couple both the main and standby transmitter-receiver units to the common antenna, is equipped with removable wave guide sections. The equivalent of an end-to-end check is made by connecting the output of the standby transmitter to an external test oscillator. The transmitter signal is then mixed with the oscillator signal. The resulting frequency, which is selected to be the operating frequency of the idle receiver, can be applied to the standby receiver for noise and frequency response tests without interrupting the operating channel.

The new microwave communications system will handle CTC circuits in addition to voice and printer communications. SP's inter-city dial telephone network will operate over the new microwave system, rather than on wire lines. This results in more voice channels and provides communications with a reliability factor of 99.99% — the equivalent of 53 minutes of outage a year.



More than 2¼-million Griffin EQS Steel Wheels roll steadily and smoothly under all types of equipment. They provide:

MAXIMUM PROTECTION FOR TRUCKS, CARS, AND LADING



Griffin® Wheels Are Cast in Balance to Stay in Balance. A pair of wheels on an axle may have the same tape size and *still* be out of balance . . . slowly and steadily shaking running gear out of alignment. This doesn't happen with Griffin Wheels because dimensions, as cast, are accurate to 20-thousandths of an inch.

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OPERATION SPEED-UP—20

'Q' Cars Measured In Motion

Measure-in-motion checking of high-wide loads is helping the Burlington minimize delay to such prime traffic as new autos and trucks moving on rack cars.

Vice President-Operations E. L. Potarf cast a dissatisfied eye on the time-consuming, measure-by-hand methods ordinarily used to make sure loads are within clearance standards. He wanted a device for in-motion checking—and Burlington's mechanical and engineering departments developed and built it.

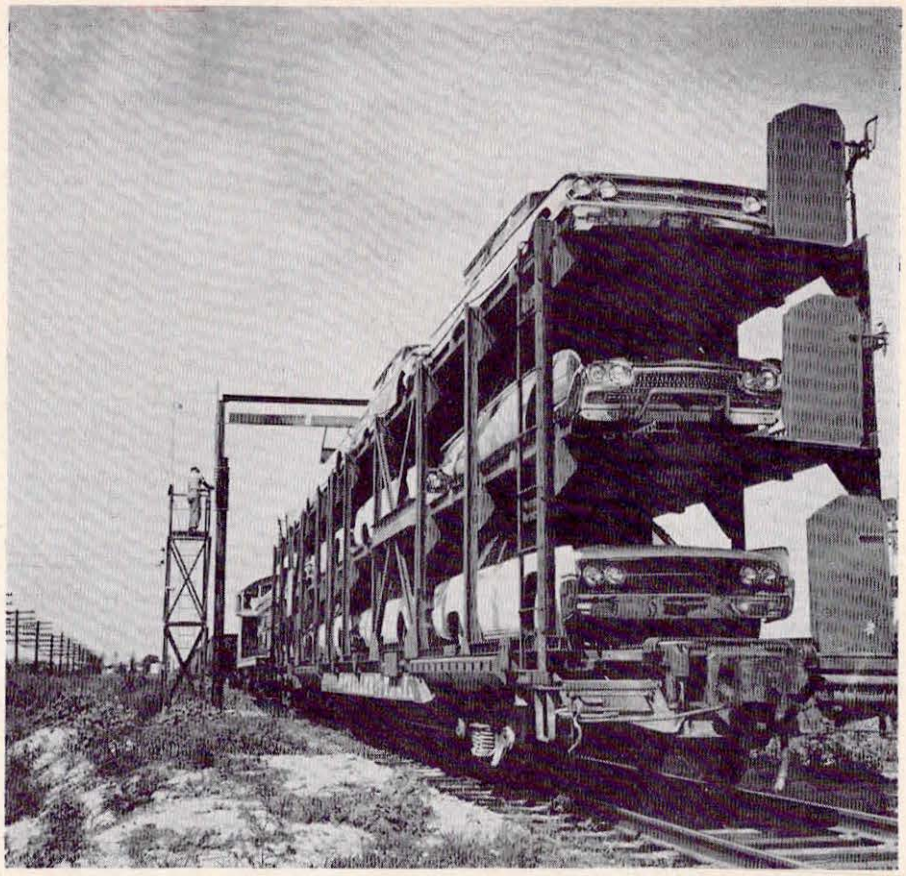
In operation, measuring rods at the top and sides of the device are pre-set to clearance standards. Cars are then run through, under the watchful eye of an operator. If a load exceeds clearance standards, it brushes against the measuring rods, which rotate out of the way and at the same time record the exact amount of overage on dials on the operator's control panel.

With accurate measurements on oversize loads so quickly available, Burlington can then make whatever special-handling arrangements are necessary (connecting lines, if any, are immediately notified by Teletype to minimize delays at junction points or on the receiving carrier's lines).

Shipments moving through the load measurer are carefully protected against damage. Horizontal measuring rods have a heavy coating of latex and the feeler suspended from the top of the device has a rubber edging—so there's no chance of putting even the slightest scratch on the paint of somebody's new car or truck.

Burlington installed the new device at its Eola, Ill., yard—a strategic location for catching almost all traffic moving west or north.

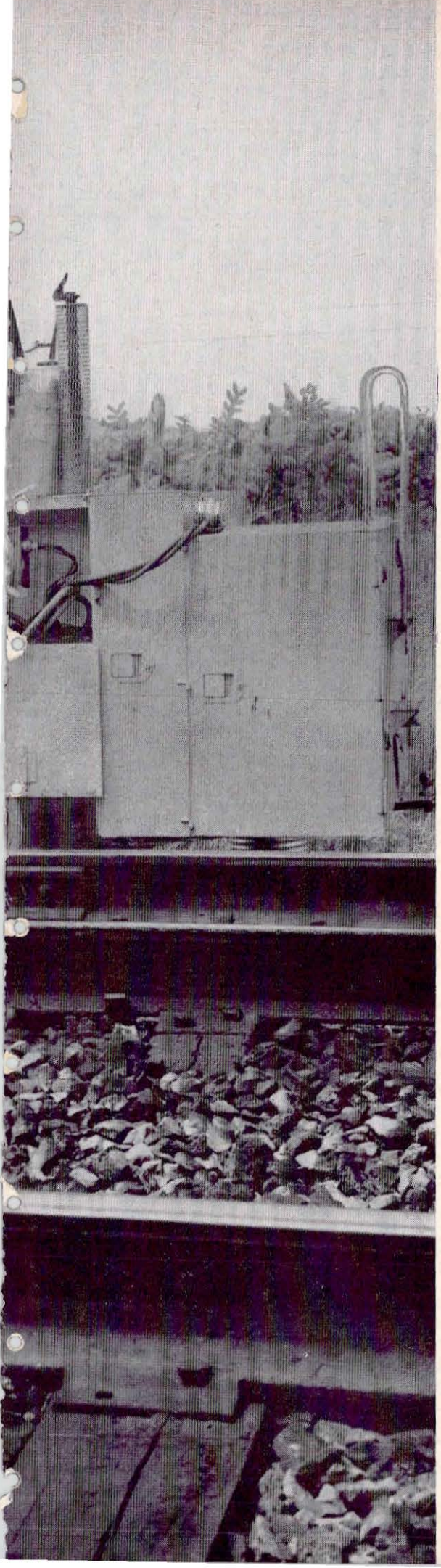
Now "suspect" loads move quickly through the yard. Delay for measuring is eliminated. Operating personnel are happy with the way the device is working—and Burlington sales forces are equally enthusiastic about the manner in which the measurer is expediting movement of high-wide loads.



MEASURING RODS extending from sides and top of load measurer are pre-set to clearance standards before tri-level is run through.

OVERSIZE LOAD will brush against rods, which rotate out of the way and record exact amount of overage. Rods are coated with latex to prevent damage to cars. Device is installed in the Burlington's Eola, Ill., yard.

Another extra from your
OXWELD Railroad Department



NEW! "OXWELD" RAILROD A FASTER, BETTER WAY TO BUILD UP RAIL ENDS

Now LINDE introduces the Railrod system, a welding machine and cored wire electrode specially designed for semi-automatic electric rail end build-up. One-third faster than any other known method, it maintains wire feed and arc length automatically, taking the guesswork out of welding. This new unit features continuous operation—there are no interruptions in the welding cycle—metal is continuously being deposited.

OXWELD Railrod does a quality repair job, too. The deposited metal lasts from 50 to 100 per cent longer than that put down by other electric processes or other types of rod or electrode. In average track conditions, the alloys in Railrod produce a hardness of 375-425 Brinell, harder than any electrode or rod now used commercially in rail end build-up. More than 50 million gross tons of traffic have gone over an in-track test section with no visible signs of wear, chipping or cracking. The cored wire has all the flux and shielding media in the center of the electrode—right where they belong—in the heart of the weld as it's being made.

OXWELD Railrod costs less too! There's no wasteful stub loss, unlike that inherent in stick electrode welding. Railrod equipment is a favorite with welding operators—the automatic wire feed and arc length adjustment reduce fatigue and permit an inexperienced operator to do a better job, and let a skilled man work much faster. The torch is lighter, too—there is no pesky slag to be chipped away from the weld area. This new system produces less heat on the operator's hands, making it more comfortable for the operator to apply.

OXWELD Railrod is still another in the line of new money-saving products and services from LINDE's own Oxweld Railroad Department. For full information, contact your nearby representative. Or write Oxweld Railroad Department, Linde Company, Division of Union Carbide Corporation, 270 Park Avenue, New York 17, N. Y.; 230 N. Michigan Avenue, Chicago 1, Illinois. In Canada: Union Carbide Canada Limited, Linde Gases Division, Toronto 12.

The complete Railrod machine comes mounted on a cart, or on a skid and can be used with either on- or off-track equipment.

OXWELD
RAILROAD DEPARTMENT
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COMPLETED typical elevation project of the road's grade-crossing-elimination program is this one at Freeport. Route of temporary tracks in foreground was a public street and has since been restored as a street and public parking area. Space under the viaduct is turned over to the local community for parking.

Long Island Begins Huge Building Job

► **The Story at a Glance: To relieve traffic congestion and to get ready for the forthcoming World's Fair, the New York State Department of Public Works has embarked on an enormous road-building project on Long Island. Nearly $80 million worth of bridges and grade-crossing elimination projects involving the Long Island Rail Road are to be constructed in the next five years.**

Checking the mountains of drawings for the design of the many structures, in addition to supervising the actual construction of both permanent and temporary facilities, as well as coordinating the work, are jobs that have placed a heavy burden on the railroad's engineering staff.

Mushrooming suburban growth has created a veritable single city out of the more than 50 villages and towns covering the western half of Long Island. It has also produced a monumental construction nightmare for the Long Island Rail Road and the New York State Department of Public Works.

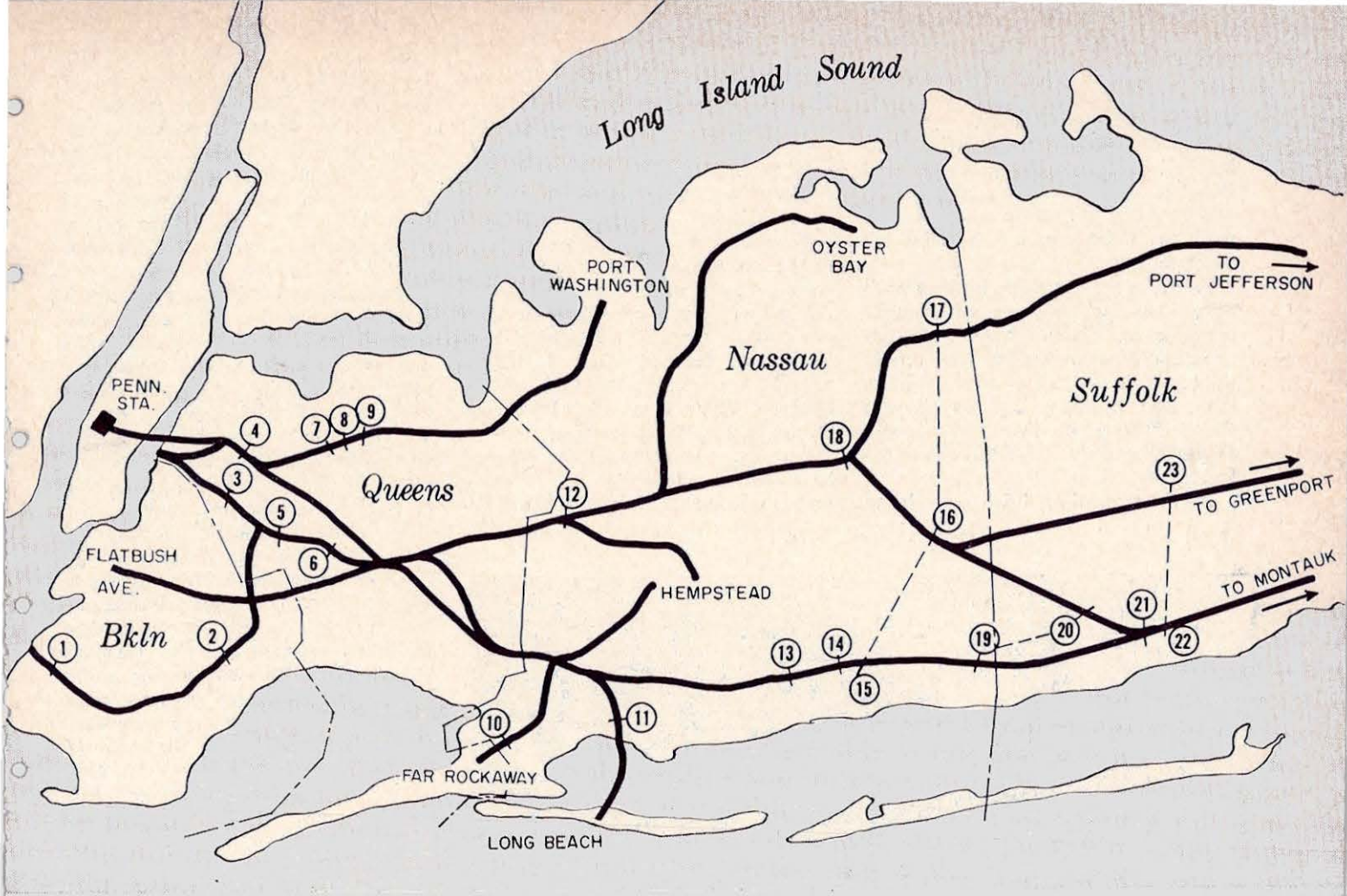
Postwar Long Island — at least that part of it up to 40 and 50 miles from New York City — has seen a residential, commercial and industrial development not even the most optimistic chamber of commerce official would have dared let himself dream about.

With this fantastic growth — population has soared more than 120% to more than 2,000,000 in the past 12 years — came an inevitable problem in these days of rubber-tired suburbs. Enormous road-building programs, new express highways and parkways — and ever-increasing traffic congestion — came with the people, the shopping centers and the industries.

To the Long Island — busiest passenger railroad in the nation — this means a fantastic construction program that in the next five years will produce nearly $80 million worth of bridges and grade-crossing-elimination projects aimed at helping unsnarl tangles into which motorists get themselves. On top of all this, the forthcoming New York World's Fair (1964-65) has brought new problems, including more road work and construction of a new station to serve the Fair.

It's the biggest concentrated construction program in the 128-year history of the LIRR, which has seen some pretty fabulous jobs carried out in the past without interference with the movement of its more than a quarter of a million daily passengers.

Right now, 12 individual projects, whose aggregate estimated construction cost runs to more than $30 million, are



MAGNITUDE of the work facing Long Island Rail Road engineers for the next five years is shown in the map, which keyed, project by project, to the tabulation below. Total cost of the work will approximate $80 million.

PROJECT	COUNTY	LINE	ESTIMATED TOTAL COST	UNDERGRADE OR OVERHEAD
1. Gowanus Parkway	Brooklyn	Bay Ridge Br.	$ 1,000,000	OH
2. Rockaway Parkway	Brooklyn	Bay Ridge Br.	N. A. ——	UG
3. Flushing Avenue	Queens	Montauk Br.	2,500,000	UG
4. Bklyn-Queens Expressway	Queens	Main Line	1,500,000	UG
5. 88th Street, Glendale	Queens	Montauk Br.	1,000,000	OH
6. Woodhaven Blvd.	Queens	Montauk Br.	250,000	OH
7. Grand Central Pkwy.	Queens	Pt. Washington Br.	500,000	UG
8. Worlds Fair (incl. station)	Queens	Pt. Wash. Br.	1,000,000	OH
9. VanWyck Expwy. Extension	Queens	Pt. Wash. Br.	250,000	OH
10. Nassau Expwy.	Nassau	Far Rockaway Br.	2,000,000	UG
11. Lawson Boulevard	Nassau	Long Beach Br.	250,000	OH
12. Floral Park. (elimination)	Nassau	Main Line	12,000,000	UG
13. Meadowbrook Pkwy.	Nassau	Montauk Br.	250,000	OH
14. Wantagh-Seaford (elim.)	Nassau	Montauk Br.	10,000,000	UG
15. Wantagh-Oyster Bay Expwy.	Nassau	Montauk Branch	1,250,000	UG
16. Wantagh-Oyster Bay Expwy.	Nassau	Main Line		UG
17. Wantagh-Oyster Bay Expwy.	Nassau	Pt. Jefferson Br.		
18. Hicksville (elim.)	Nassau	Main Line	12,000,000	UG
19. Sunrise Highway Ext.	Nassau	Montauk Br.	1,000,000	UG
20. Sunrise Highway Ext.	Nassau	Central Br.		UG
21. Babylon (elim.)	Suffolk	Montauk Br.	10,000,000	UG
22. Deer Park Ave.	Suffolk	Montauk Br.	1,000,000	OH
23. Deer Park Ave.	Suffolk	Main Line		UG

actually under way, all within a 30-mile distance between Bay Ridge and Babylon in Suffolk County.

Two of them are major grade-crossings eliminations — at Hicksville and Babylon. They will cost more than $10 million each. Both were started before work was finished on a $12-million job at Floral Park.

All three are unusually difficult projects, involving elevation of multiple trackage and interlockings and construction of new stations. All are in extremely heavy-traffic areas — more than 260 trains a day go through Floral Park, more than 200 through Hicksville and about 225 through Babylon.

At the same time, bridges are being built, rebuilt or relocated at 10 other places.

A program of this magnitude couldn't possibly be financed by a railroad the size of the Long Island, even if it were a strong profit-making line—which it isn't.

New York State is picking up most of the tab, with some federal funds involved in a few of the highway projects. All highway jobs are carried out without cost to the railroad. Under New York State law, however, the LIRR may be assessed up to 15% of the total cost of an elimination job, based on net benefits to the carrier.

But that doesn't mean the railroad has little or nothing to do with this vast rebuilding of the face of Long Island. The LIRR's engineering staff is taxed to the limit by the number of complex jobs it has to handle at one time. The load, of course, is shared by the state Public Works staff. So, since both suffer equally, the scheduling of work becomes a cooperative proposition aimed at stretching the forces of both to the greatest advantage.

Designing of the bridge structures is divided among the state department, the railroad and private consulting and engineering firms to keep from completely submerging any one agency under mountains of drawings. But no matter whose draftsmen put the lines on tracing paper, both the railroad and Public Works engineers must go over everything. And that takes time.

The railroad has a field engineer on each major job, but assigns two or three of the smaller bridge projects to one engineer. The Public Works department, for its part, has a resident engineer-accountant and two assistants right in the LIRR's engineering office. They've been around so long most LIRR employees don't even know they don't actually work for the railroad. Occasionally, their names even crop up in the employee newspaper's personal columns.

Thanks to careful planning, no increase in engineering or drafting forces has been necessary, and there's been relatively little interference with normal engineering work. Design and construction of new stations, modernization of yards and track upgrading, for instance, are going ahead all over the railroad.

Individual conditions vary so greatly from one location to another that it isn't possible to settle on any one final design and merely adopt it. Each project requires special planning, and even construction techniques differ.

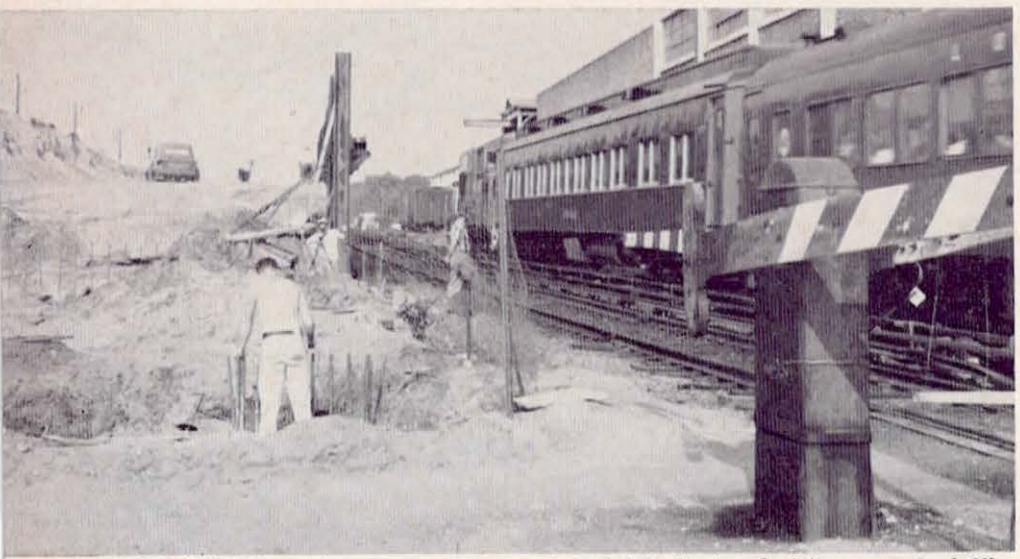
Track elevations at grade-crossing-elimination sites are essentially reinforced-concrete viaducts, with plate-girder spans over the roads and streets. Bridge reconstruction and new-bridge work also generally involve plate girders. In most instances these spans are installed by the roll-in procedure because of restricted room for temporary tracks of extremely heavy rail traffic.

One bridge reconstruction, required by the widening of Sunrise Highway, at Amityville, calls for installation of the world's first all-welded railroad girder span made of T-1 steel. The only bolted or riveted parts of the 156-ft half-through span will be the field connections.

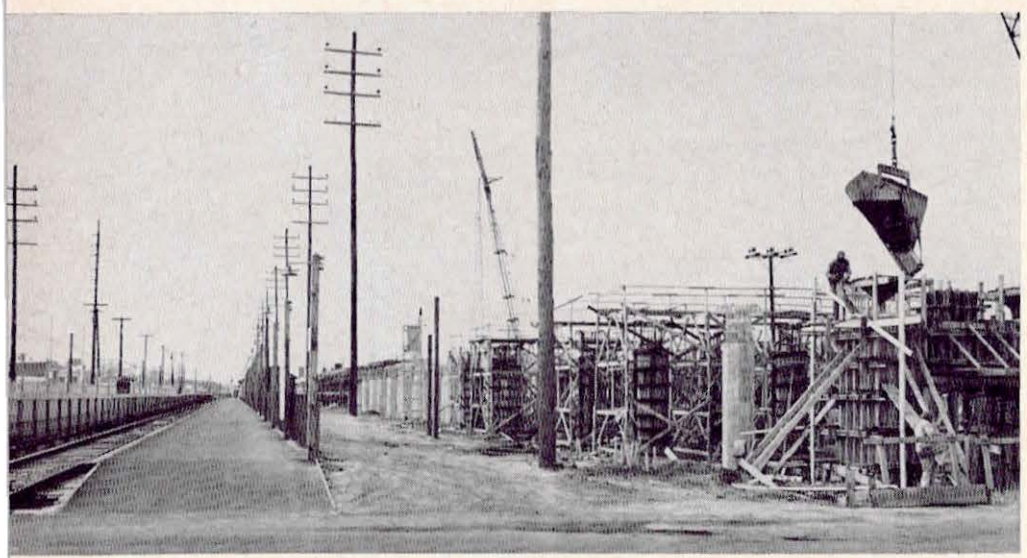
Overhead bridges crossing segments of the Long Island parkway system require special treatment, including ornamental stone facing to harmonize with parkway decor.

Contracts are generally let by the

(*Continued on page 38*)



LONG ISLAND train squeezes between industrial plant and rising mound of fill for new elevated track at grade-crossing elimination project at Floral Park. Two main tracks ran here, and two Hempstead Branch tracks skirted the fill area on the other side. Normal train service has hardly been affected by program.



TEMPORARY tracks and station platform on the Long Island's Montauk branch show the extent of facilities provided during the construction of grade-crossing elimination at Baldwin recently. Elevated structure is rising at right on regular right of way. Each project requires special planning.

Eastern Roads Seek Passenger Fare Hike

Eastern railroads, which lost $133 million on passenger service last year, want to retain as revenue the equivalent of the 10% federal transportation tax after it expires Nov. 15. Southern and western roads, however, have indicated that they won't ask for a fare increase and intend to pass the tax saving on to their customers.

The eastern action, which was not unexpected, came in the form of a petition filed with the Interstate Commerce Commission Sept. 7. The carriers told the Commission that retention of the money that now goes to the federal government would provide them with some needed additional revenue "without inflationary increases in charges paid by passengers."

They asked that a 10% increase in basic fares be made effective on the same date as Public Law 87-508 permits the passenger-fare tax to expire, "thereby maintaining the present level of passenger charges."

A. J. Winkler, agent for member roads of the General Passenger Committee of Eastern Railroads, said ICC approval of the request would bring an additional $19 million a year to the 23 carriers—"still more than $100 million short of putting passenger service on a break-even basis."

In a statement to the press, he emphasized that passengers would pay no more for rail transportation than they do at present. "The only difference," he said, "is that the equivalent of the wartime-hangover 10% transportation tax on railroad travel will go to financially hard-pressed eastern railroads rather than to the federal government, which was the intent of many Congressmen when repeal of the tax was voted."

Mr. Winkler quoted Senator Jacob K. Javits (R.-N.Y.) as saying at the time the tax repeal was being considered by Congress: "The opportunity for the roads to get the amounts represented by the tax which the individual passenger now pays is a matter of life and death for . . . these railroads."

He added that other Congressmen had expressed similar views, "indicating an expectation that the eastern roads would publish fare increases equivalent in amount and simultaneous with the effective date of the repealed tax."

Mr. Winkler pointed out that commuters will not be affected by the increase, since the federal tax is not generally collected on commutation tickets.

All passenger roads in the eastern region joined in the request to the ICC.

Joining in the application were Baltimore & Ohio, Bangor & Aroostook, Boston & Maine, Canadian National, Canadian Pacific, Jersey Central, Central Vermont, Chesapeake & Ohio, Chicago South Shore, Delaware & Hudson, Erie-Lackawanna, Grand Trunk Western, Maine Central, Monon, New York Central, Nickel Plate, New Haven, Norfolk & Western, Pennsylvania, Pennsylvania-Reading Seashore Lines, Pittsburgh & Lake Erie, Reading, and Wabash.

Reading Changes Traffic Set-Up

To improve its competitive position by strengthening its sales and service organization, the Reading will recast its freight traffic work along new functional lines. Effective Sept. 16, the railroad's present Freight Traffic department will be divided into Freight Sales and Marketing departments.

The new organizational set-up is described as "part of Reading's aggressive campaign to bring in new business." Under it, each of the new departments will channel its efforts in a single direction.

The Freight Sales department will be concerned only with selling, under direction of T. H. Ramsey, whose title will be changed from vice president, freight traffic, to vice president, freight sales.

The Marketing department will be charged with study of competitive conditions and the making of rates. It will be responsible for determining commodities available for rail transport; competitive and marketing conditions affecting movement of such commodities; relative costs of handling freight by various modes of transport, and other factors—and then for making rates which will increase Reading's net earnings by increasing its traffic volume. Head of the department, with the title of vice president, marketing, will be A. W. Hesse, Jr., now general attorney of the Reading.

"The making of railroad rates and charges has become highly complex," Reading President E. P. Gangewere said in announcing the changes. "It requires intensive research into costs, not only our own but those of our competitors. The new Marketing department will make it easier for Reading to provide our patrons with service at competitive prices.

"The new Freight Sales department," he added, "will now be able to concentrate on selling the company's services without the responsibility of the research required to determine costs and set rates."

Boeing Uses TOFC, Air, on Big Move

An unusual combination of railroad piggyback and air freight is being used by Boeing Aircraft to move household goods of employees being transferred from Seattle to New Orleans.

The move—said to be the first combined use of rail and air freight in this manner and on this scale—utilizes Flying Tiger Lines from Seattle to Chicago; Illinois Central and Chicago & Eastern Illinois TOFC from there to the Gulf city.

Behind the move is Boeing's need to provide experienced help for its Saturn project in New Orleans during the next two years. Thus, it is temporarily transferring some 700 employees, their families, and 3½ million pounds of household goods, over a three-month period.

According to Boeing, the air-rail combination—being used for about one-third of the household goods—has several advantages. It costs about $54 less on door-to-door delivery of a 12,000-lb lot. It is much faster. And it eliminates most of the per diem allowances which would be paid to moving employees for temporary accommodations in hotels or motels.

The furniture makes the entire trip in Flying Tiger pallet-mounted fibreboard containers, each capable of holding 2,000 lb of cargo and large enough to carry sofas, beds or large appliances.

Dividends Declared

GREAT NORTHERN—75¢, payable Nov. 1 to holders of record Oct. 9.

ILLINOIS CENTRAL.—50¢, quarterly, payable Oct. 1 to holders of record Sept. 4.

KANSAS CITY SOUTHERN.—Common, $1, quarterly, payable Sept. 15 to holders of record Aug. 31; 4% preferred, 50¢, quarterly, payable Oct. 15 to holders of record Sept. 28.

NORTHERN PACIFIC.—55¢, quarterly, payable Oct. 31 to holders of record Oct. 10.

NORTH PENNSYLVANIA.—$1, quarterly, paid Aug. 25 to holders of record Aug. 17.

3 BIG of the GRS

1

Viewing the wheel hub gives you . . .

The truest indication of bearing heat—at the natural heat sink. By focusing on this hub area, *abnormal* heat caused by dragging brake shoes can also be detected, as well as—and these are actual instances—defective traction motor suspension bearings, and a wheel loose on its axle. *These are extra benefits not available with systems that scan the journal box.*

2

Right angle scanning of the rolling stock gives you . . .

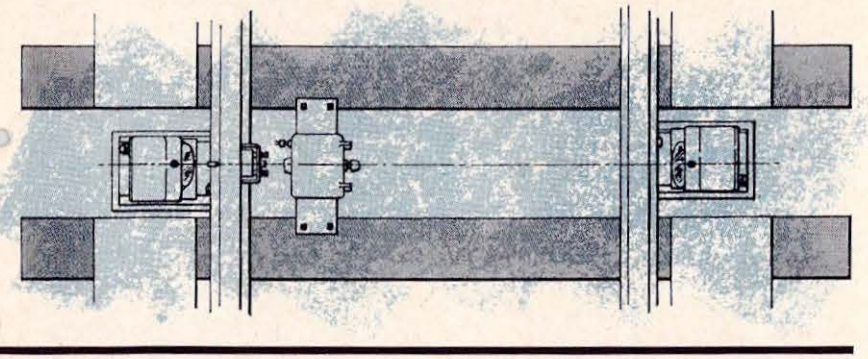
Operation with traffic in both directions. No additional track mounted or wayside equipment required. No costly duplication.

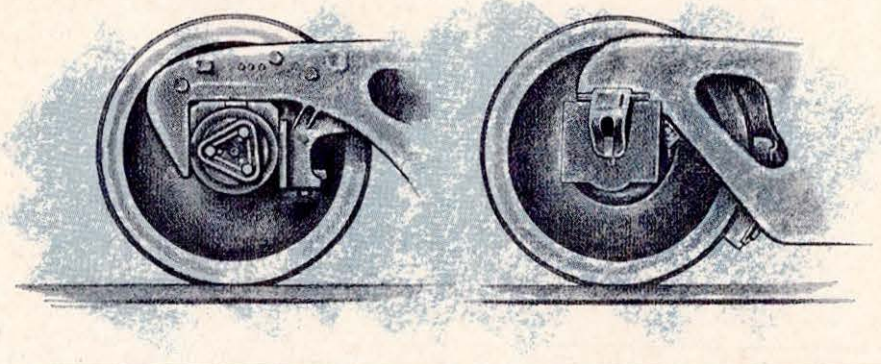
3

No special analysis required for cars with roller bearings . . .

A normal bearing—plain or roller—presents the same indication on the recording. All types of bearings register the same relative amount of pen deflection, eliminating confusion between plain bearings and roller bearings.

BENEFITS
WHEEL THERMO-SCANNER UNIT





MORE BENEFITS

100% accurate car count . . .
An important additional feature when printed readout is included with your installation. Whether the rolling stock has four, six, or more wheels per truck—the number of passing cars is precisely counted for fast, easy location of incipient hot boxes.

Flexibility . . .
There's a Wheel Thermo-Scanner Unit *to fit the needs of your railroad*. Receiving equipment can be operated directly—up to five miles from the electronic field equipment. Data-Tran or FSK, frequency shift carrier, is available for long distance transmission of data. Printed readout can be added to an existing system.

The Wheel Thermo-Scanner Unit is built for *railway* use by a *railway* equipment manufacturer. It combines more practical beneficial features than any other hot-box detector. Install Wheel Thermo-Scanner Units *now*, at strategic points along your line—you'll find them the best choice for dependable protection.

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GENERAL RAILWAY SIGNAL COMPANY

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Why Not a Voluntary Variable Per Diem?

To the Question and Answer Editor:

I was interested to note [RA, July 16/23, p. 31] the letter on "Why Not a Voluntary Variable Per Diem?" The matter of per diem charges has been of great importance to all railroads whether as owners or renters of freight cars. The American Short Line Railroad Association membership has had the question of proper charges before meetings for years, so our consideration of the problem is not new.

As president and general manager of a short-line railroad, I have had car supply and car rental charges very much on my mind for the past several years because of the very important place they take in this railroad's service to shippers and cost of operation. I believe car supply and car rental should be considered at the same time, for they certainly go hand in hand. We cannot expect an adequate supply of interchange cars without proper rent.

I note that in the past there has been considered the possibility of a central car supply and service agency to be organized and operated by the many railroads, something along the order of the Railway Express Agency or The Pullman Company. All interchange equipment would thereby be turned over to, replacements or new equipment purchased by, distributed by and rents or leases collected by this agency. This would automatically remove the question of debit and credit ownership, return of empties to home owner, area distribution to relieve seasonal pressures and other individual line ownership problems. On the other hand it would create adverse situations which in my thinking would more than offset any good derived from the single agency.

The greatest risk would be to shipper-railroad relations. The shipper must necessarily look to the railroad serving his plant for car supply, including special equipment and service. The railroad must look to its shippers for the business on which it must rely to exist. A national agency would remove this close relationship but, certainly, not the need for it. This and other thoughts lead me to believe a single agency for car supply should not be seriously considered.

If the idea of such an agency is not to be accepted, we must then give greater consideration to the ownership by individual lines of cars in an amount equal to each line's average daily usage and weighted to take care of peak or seasonal loadings. Likewise, this is not entirely possible because of the constant change, ebb and flow of car demand and of car type.

Even though the perfect state could never be reached the railroads could go a long way toward equalized car ownership.

Two thoughts come to me: First, the question of the small railroads owning equipment for interchange service. Rather than for the very small road to own cars and put them in the national car pool, I feel this could best be handled by the small road making arrangements with its main line connection or connections to increase the main line's total ownership in the amount of the short line's average daily requirements. The short line could arrange to pay a fixed contract price per period, or per diem, or a mileage charge to its connection in lieu of car ownership. I do not believe we would expect or want every small line to own and use in interchange the two to thirty or forty cars that might be its daily need. I also feel that lines which are entirely switch lines should not be expected to furnish cars for the national pool. Accounting and reporting would become too complicated and burdensome.

Possibly the larger short lines, such as the McCloud River, should own enough cars to equal the daily average number on its line.

Assuming all railroads, except the very small and the switching lines, are to own cars equal to the daily average needs, a source for new car purchases and financing should be worked out. Possibly a central clearing agency, the AAR Car Service Division, or some other could be of assistance to smaller or weaker lines in placing orders for cars and arranging means for financing. Let us say that perhaps a line would want to purchase only 10 standard box cars. It would have a difficult time obtaining an equitable price if it were to place the order by itself with a manufacturer. However, if this order could be included with an order from another railroad ordering 500 similar cars, making a total of 510 box cars, all alike, the small line could have the advantage of the mass production price.

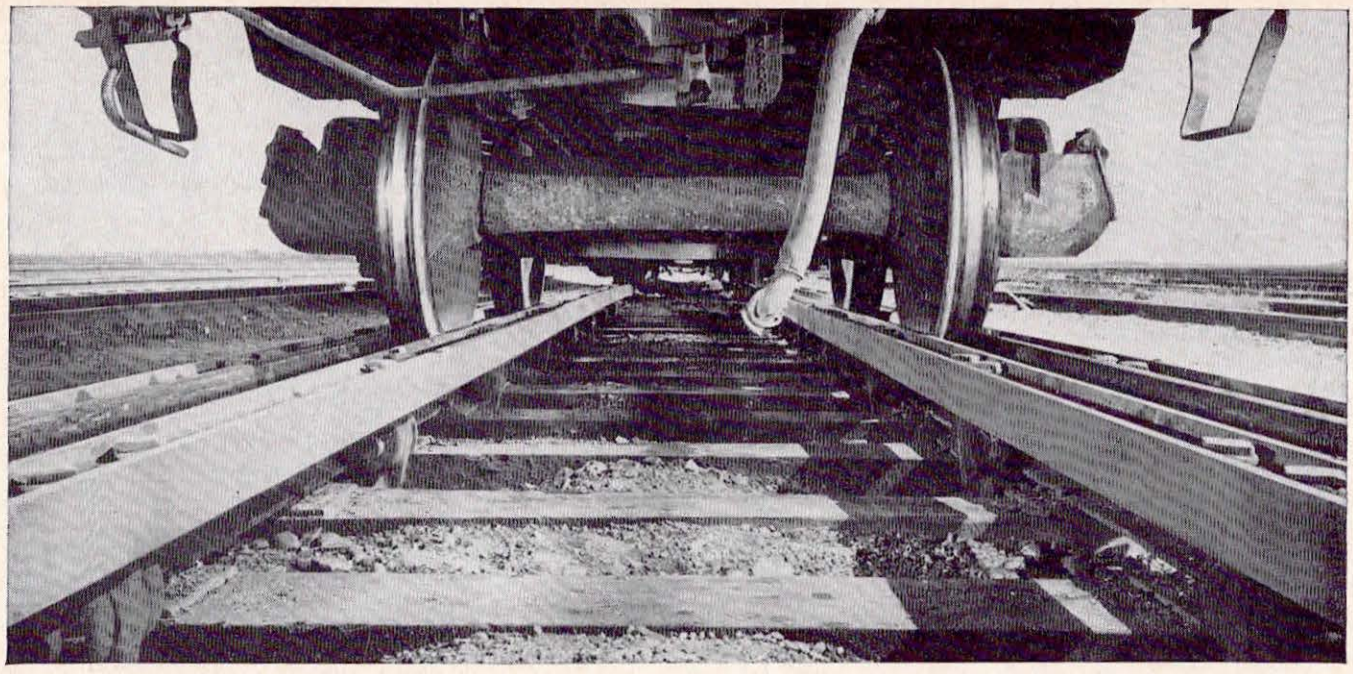
As long as the cars ordered were to be standard, a similar arrangement might be had for financing the purchase. Even though a small railroad could pay its monthly per diem bill, it might have difficulty obtaining money for the purchase of box cars at a fair or equitable rate of interest. By tacking its order on to that of a large purchaser and by ordering standard equipment so that there would be no risk to the finance company in case cars would have to be resold, I can see no reason why it should not receive the same terms received by the larger or stronger railroad.

My second thought concerns rental cost of equipment. I cannot reconcile in my mind the theory of equal consideration for all cars in interchange service regardless of original cost, life expectancy, maintenance or salvage value. In other words, I cannot feel a railroad could fairly put into the interchange pool a flat or log car suitable for loading lumber or logs and receive the same consideration or rental price for it as another might for a new air slide covered hopper which would cost three times as much, require more maintenance, and last about 75% as long.

I suppose that even though all lines might own cars sufficient for each there would necessarily have to be a per diem charge. I say a "per diem" charge although I cannot agree in a single per diem rate. Although interchange usage of cars would theoretically wash out in the long run, it would be necessary to keep cars moving and to keep individual lines from holding more cars

(*Continued on page 30*)

A forum for railroaders who want to explore questions of importance to their industry, this department welcomes both questions and answers from readers at all levels of responsibility in the industry and associated fields. We'll pay $10 to any reader submitting a question that forms the basis for a column discussion. Address correspondence to Question and Answer Editor, Railway Age, 30 Church St., New York 7, N.Y.



BALANCED BRAKING

Racor® mechanical car retarders clasp each wheel individually for consistent braking regardless of wheel mounting variations

Consistent braking, dependable braking—that's the kind of braking you get every time with Racor mechanical car retarders. You get the same braking, car after car, because of Racor's exclusive balanced braking principle. Here's what this means:

First, each wheel is clasped on both sides. There's no force tending to press it off the axle, no force to crowd the flange against the running rail. The rugged Racor unit "floats" from side to side, gripping the wheel with the same pressure on the front and back.

Second, each wheel of a pair is clasped independently of its mate. Variations in wheel back-to-back distances have no effect on the Racor retarder's operation.

Third, less flange pressure. Improper adjustment of the Racor retarder cannot cause unusually heavy pressures against flange of wheel.

In yard after yard, Racor mechanical car retarders are eliminating skates, speeding operations, and returning as much as 40% on their investment. Ask your Brake Shoe representative to show you how they can help improve your yard operations. American Brake Shoe Company, Railroad Products Division, 530 Fifth Ave., NewYork 36, N.Y.

In Canada: Dominion Brake Shoe Company, Ltd.

AMERICAN Brake Shoe COMPANY

Quality products cut your ton-mile costs

A-1535

VARIABLE PER DIEM? *(Continued from page 28)*

than necessary for anticipated loading use, the amount of an "average" per diem rate would be more obviously a penalty cost for inefficiency rather than a usage charge. If the per diem rate is to be left at a single rate figure, regardless of type of equipment, then it should be set at an amount solely from a penalty point of view. However, I cannot help but feel this to be the wrong approach. Also, I am not in accord with the varying set of per diem rates based on car age alone. Further, the proposal brought out by the court in B&M et al. vs. U.S.A. and I.C.C. for a time-mileage variable scale has not particularly impressed me as being the final answer for two reasons: first, it is too difficult to compute and account for, and second, car costs for wear and deterioration are not necessarily based on miles operated. Rather, I feel the per diem method of computing rentals is yet the best and recommend consideration of a simple plan of variable charges.

Today we have in operation cars constructed 20 to 50 years ago on which the same per diem rate is charged as on new modern equipment. The old cars originally cost about one-quarter of the present price for new cars. What would be wrong with the thought of grouping cars for per diem purposes? Let us say freight cars are to be grouped in from 6 to 8 general classes and a suffix added to the car number to denote its group for accounting purposes. Perhaps the grouping of cars should be based on a simple formula using original cost, life expectancy, salvage value, special or extraordinary maintenance as might be required for special equipment, and possibly interest. Cars later improved, modified or rebuilt could be regrouped under an agreed formula. Regular maintenance for wheels, draft gear, safety appliances, brakes, etc., borne by car owners should be about the same for all cars and could therefore be ignored or added in one amount.

I would, therefore, suggest the following equation:

$$\frac{\text{(Original Cost—Salvage)}}{\text{Anticipated Life}} + \text{Average Annual Fixed Regular Maintenance} + \text{Average Annual Special Maintenance} = \text{Annual Cost Factor.}$$

As an example, let us apply this formula to a car. Imaginative figures are necessarily used as there is such a variance in present costs of equipment. Regular maintenance of $1.00 per day is used as a rough approximation:

EXAMPLE

ABC Railroad purchased a new standard 40-ft single-door box car. (Figures shown are fictitious and not necessarily approximate to what actual would be.)

Original cost	$8,000
Interest @ 3½%—15 yrs.	4,200
Salvage value est.	800
Anticipated life	30 yrs.
Regular maintenance (owner's expense)	$365 per yr.
Special equipment maintenance (owner's expense)	None

EQUATION

$$\frac{(8{,}000 + 4{,}200) - 800}{30} + 365 = 745$$

$745 \div 365 =$ Daily cost of ownership

For other equipment, a variable per diem scale would be used. By the use of such a formula, railroads would be encouraged to buy new equipment and to retire obsolete equipment. Also, each grouping would stand on its own feet. In the past there have been objections to a varying scale of per diem rates because of the complications of accounting. The groupings would be so few, and with modern accounting methods, machines and punch cards, this should no longer be a deciding factor. The formula could be set up by a car service committee that also would be able to get data necessary for arriving at the cost factor or the suffix classification figure from the carriers on old equipment and new equipment as purchased. In other words, if the ABC Railroad should buy several hundred new gondolas it could submit the information to the car service committee which could then assign the suffix letter designating the per diem classification.

Summing it up: First, as to car supply, I certainly feel each railroad except the very small or switching line should own as many cars as its daily average on-line requirement weighted for seasonal peak loading and for each small line not owning its own cars to arrange with connections on some reasonable basis for the connections to increase their ownership sufficiently to make up the small line's average.

Second, means should be established for smaller and weaker lines to buy and finance equipment at the prices and interest rates larger lines enjoy.

Third, per diem would be necessary but per diem rates should be established for groups of cars based on annual cost of ownership and maintenance.

I recommend these opinions for consideration.—*Flake Willis, president. McCloud River Railroad Company.*

Reading Buys L&S From LCN

Under a joint agreement announced Aug. 29 (RA, Sept. 3, p. 7), the Reading Company will acquire the Lehigh & Susquehanna Railroad from Lehigh Coal & Navigation Co., subject to a 35-year leasehold interest to be retained by the latter.

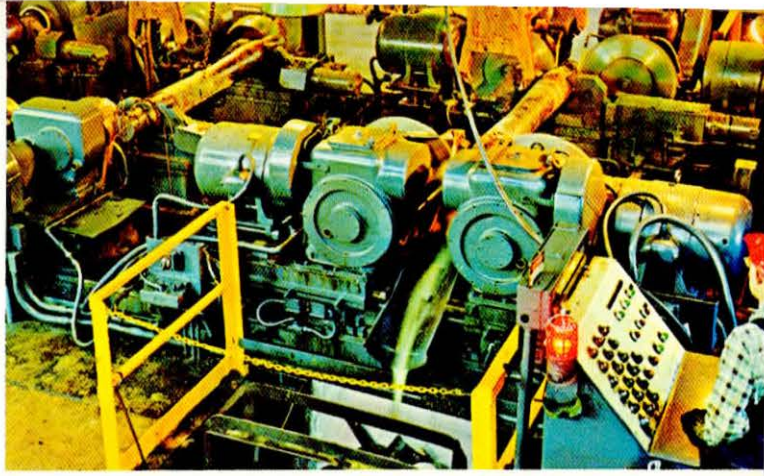
The transaction is subject to approval by the ICC and by stockholders of Reading and of LC&N. It involves a consideration of $500,000, to be paid by Reading in annual installments over a five-year period.

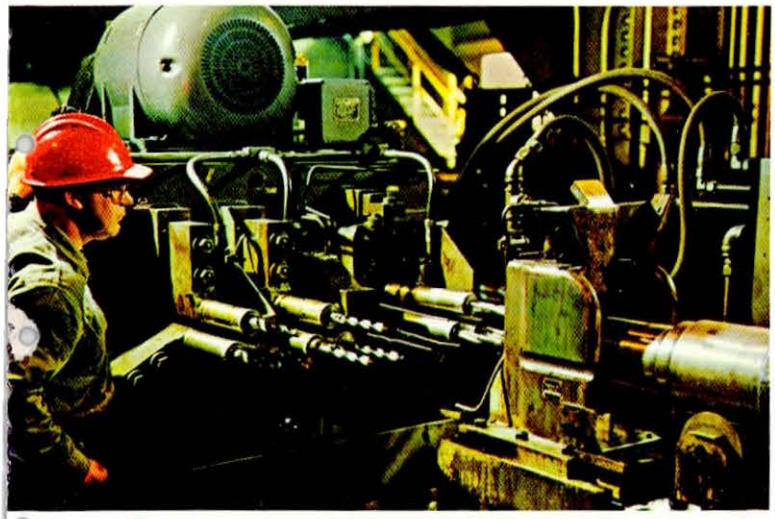
The L&S extends from Phillipsburg, N. J., to Union Junction, Pa. (between Wilkes-Barre and Scranton), approximately 105 mi, plus about 32 mi of branch line. It is presently under long-term lease to the Central of New Jersey at an annual rental of about $2,300,000. If the lease should be terminated during the 35-year period in which LC&N is to retain its interest, Reading is given the right to operate its trains over L&S property between Allentown, Pa., and Phillipsburg.

In announcing the agreement, E. P. Gangewere, president of the Reading, said the portion of the L&S between Allentown and Phillipsburg "is an essential link in the through service being performed by the Reading to New England via the Lehigh & Hudson River, and to New York harbor via the CNJ." The transaction, he stated, will give added assurance of continuance of "these important routes," and will ultimately give the Reading ownership of the entire L&S. The latter will continue, however, to be operated under lease by the CNJ.

H. L. Thompson, president of Lehigh Coal, said the transaction was in line with recent moves by that company "to re-evaluate its railroad holdings and its lease arrangements on railroad properties." He cited as an example of that policy the sale to the CNJ last year of important parts of the former Lehigh & New England. His company, Mr. Thompson said, had sought "outright disposition" of the L&S, but when accomplishment of that proved impossible the agreement with the Reading—which provides for amortization over 35 years of Lehigh's financial interest in the property—was deemed "most equitable."

1. After the axle has been forged and straightened (and heat-treated, if desired), it enters the first machining operation. On this four-station, index-type automatic machine, we saw axles to length, mill the end faces, drill the centers.

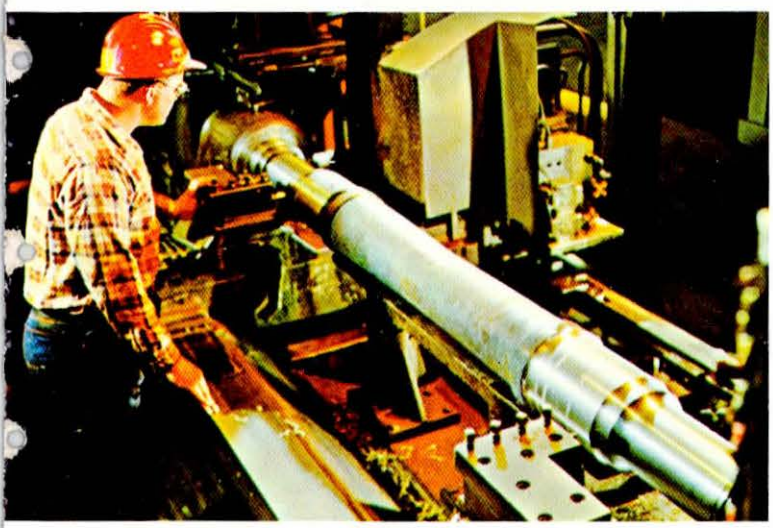




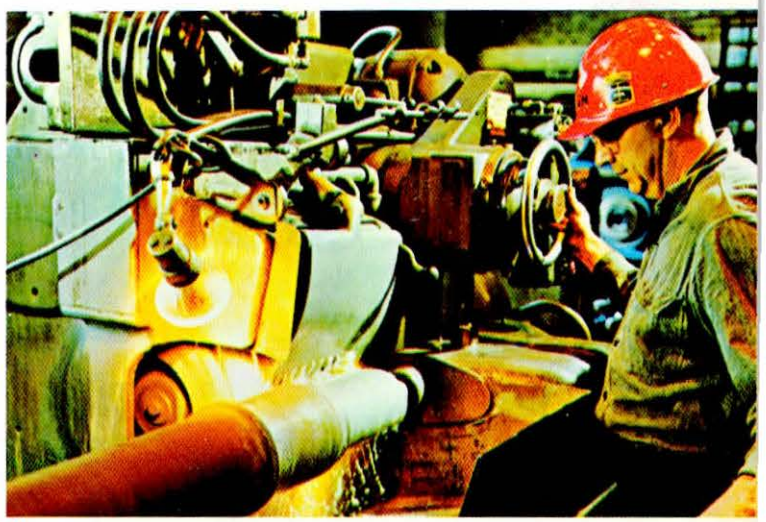
2. Here, we drill and tap the roller-bearing end-cap holes in a four-station machine. The stations are 1) spot-drilling, 2) finish-drilling, 3) washout of holes, 4) tapping. Each operation is performed simultaneously on both ends.

Watch how we machine these blue-ribbon roller-bearing axles

We wish you could actually visit our axle plant, for we believe Bethlehem's facilities for manufacturing roller-bearing axles are the most modern in the country. We can produce the two most common roller-bearing axles in freight service: AAR Standard and AAR Alternate Standard. We also make solid-bearing freight-car axles, and roller-bearing axles for passenger cars and diesel locomotives. What kind of axles do you need?



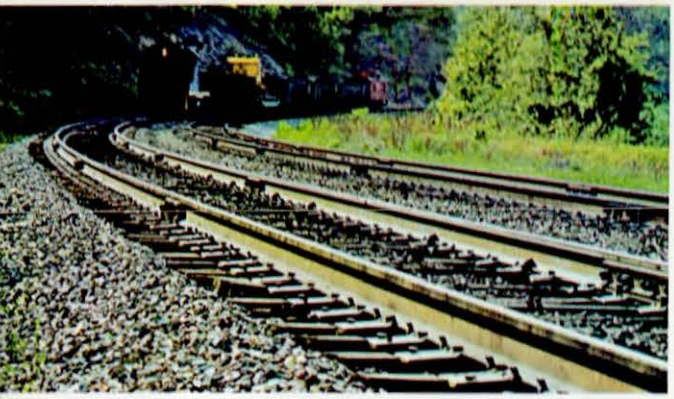
3. On tracer-control dual-end drive lathes, we semi-finish-turn the journals and dust guards prior to grinding, and finish-machine the wheel seats.



4. Finish grinding is performed on contour grinders, to dimensions as established by the AAR. Each grinder is equipped with a wide wheel into which the exact contours of the axle journal and dust-guard seat have been dressed.

BETHLEHEM STEEL

BETHLEHEM STEEL



Chesapeake & Ohio runs on heat-treated rails at Hart's Run, W. Va.

253 tons of Bethlehem fully-treated rails replace standard rails worn out by abrasion

In May, 1960, the Chesapeake & Ohio Railway installed 253 net tons of 140 RE Bethlehem fully heat-treated rails between mileposts 315.2 and 316.2, at Hart's Run, W. Va., about three miles west of White Sulphur Springs. The grade is 0.57% ascending, and the curvature ranges between 3 degrees 30 minutes and 5 degrees 45 minutes.

Immediately prior to this new installation, standard control-cooled rails—typically carrying 28,000,000 tons of traffic in a given year—had worn out through abrasion in 2 ½ to 3 years, including transposition of the rails. This installation is providing a true test of the ability of heat-treated rails to resist abrasion.

The C&O is another of the many forward-looking railroads which are taking advantage of the long-range economies of fully heat-treated rails. We have many revealing case histories we would like to show you. A Bethlehem engineer is within easy reach of your headquarters. Just write to our nearest office, or direct to Bethlehem, Pa.

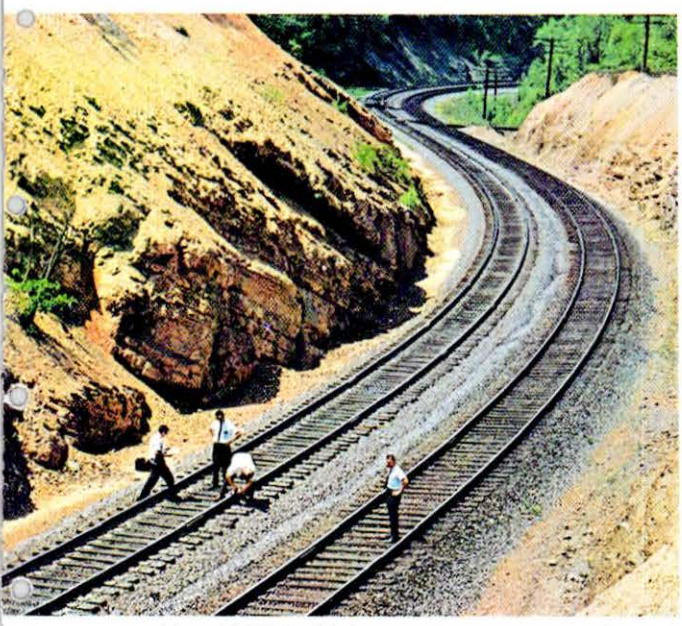
A lift of heat-treated rails is caught by the camera at the moment of entry into the oil-quench. These larger heat-treating facilities at our Steelton, Pa., plant triple Bethlehem's capacity for heat-treatment of rails.

BETHLEHEM STEEL

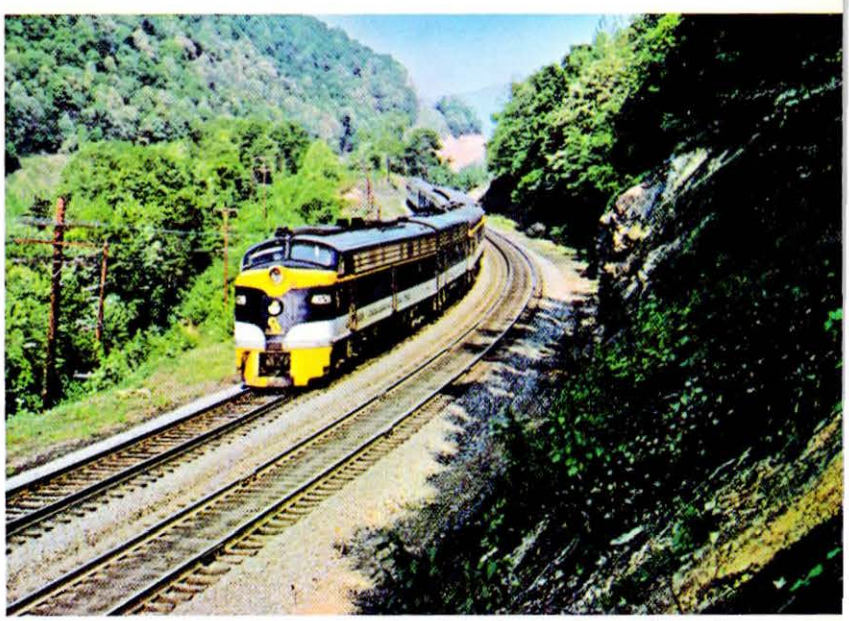
BETHLEHEM STEEL

Heavy tonnage snakes eastward through a reverse curve of 5 degrees 37 minutes and 5 degrees 45 minutes in the mountains at Hart's Run, W. Va. The train is running on Bethlehem fully heat-treated rails laid May 28, 1960.

Railroads get 2 to 7 times longer rail life from heat-treated rails

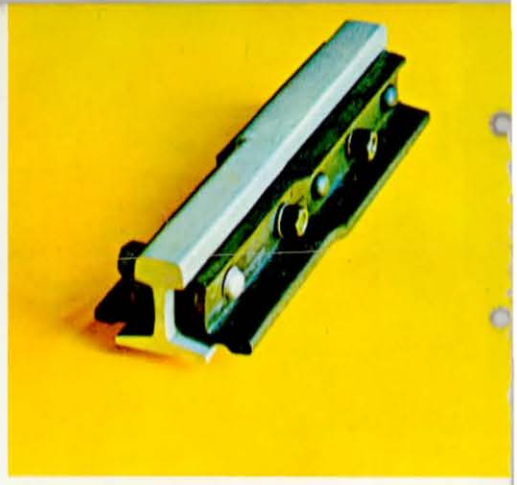


May, 1962: Bethlehem and C&O engineers inspect eastbound (heat-treated) track for wear due to abrasion. Contour tracings revealed wear so slight that, even before transposition, the heat-treated rails will have given several times more service life than previous (untreated) rails.

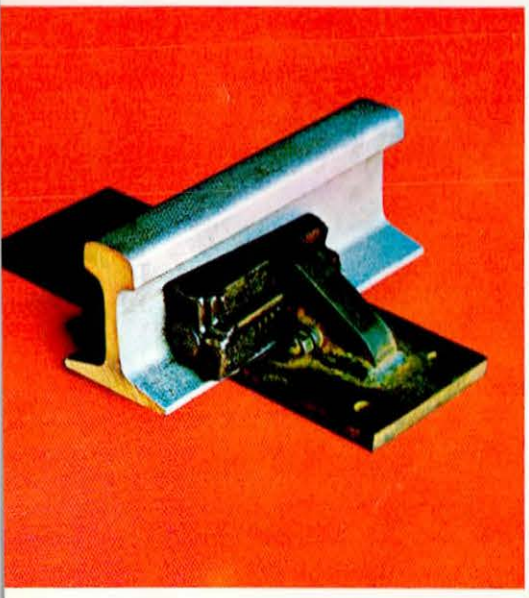


Westbound C&O passenger train streaks along beside the eastbound heat-treated track through scenic Allegheny Mountain country.

Bethlehem Hook-Twin tie plates provide stronger, more stable holding power than regular track spikes. They are ideal for frogs, crossings, closure rails, tee guard rails, graduated riser switches. Two plates fit on tie, easily adapt to any position on any frog or crossing. Hook-Twin tie plates distribute load over broad tie area, check lateral and vertical thrust, increase tie life.



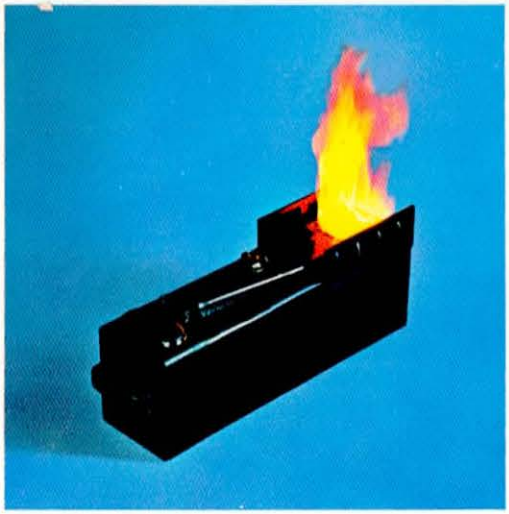
Bethlehem compromise joint, also called "offset splice bar," is hot-forged and machined to conform to individual rail sections. Available in a wide variety for connecting rails of different section; or of the same section but of different joint drillings.



Bethlehem 811 spring rail brace combines foolproof bracing with minimum maintenance. Wedge-shaped forging fits snugly between triangular bracing member and web of rail. Steel spring in wedge provides automatic take-up for wear, keeps assembly tight. A pawl-and-slot feature provides positive locking, with horizontal adjustments in 1/16-in. increments.

How to make good trackwork out of ordinary track

"Little things" like these can make the big difference



Bethlehem Winter King switch heaters keep switches open in blizzard weather. One man can tend as many as 100 units. Fuel chamber allows 9 to 15 hours of operation, depending on the easily-adjusted size of flame. Easy to install and remove, virtually maintenance-free except for necessary refueling. Winter King measures 18 in. long, 4½ in. wide, 5½ in. high.

Bethlehem ANCO self-locking nuts, ideal for connections that must stay tight. Extra-strong alloy steel pin, crimped into each nut, travels between bolt threads and acts as ratchet to anchor the nut. Installed with ordinary hand wrench, can be removed and reused. ANCO nuts meet IFI specifications for prevailing torque-type lock nuts.

Steel *for Strength ... Economy ... Versatility*

A nearby Bethlehem engineer will gladly help you with your trackwork problems

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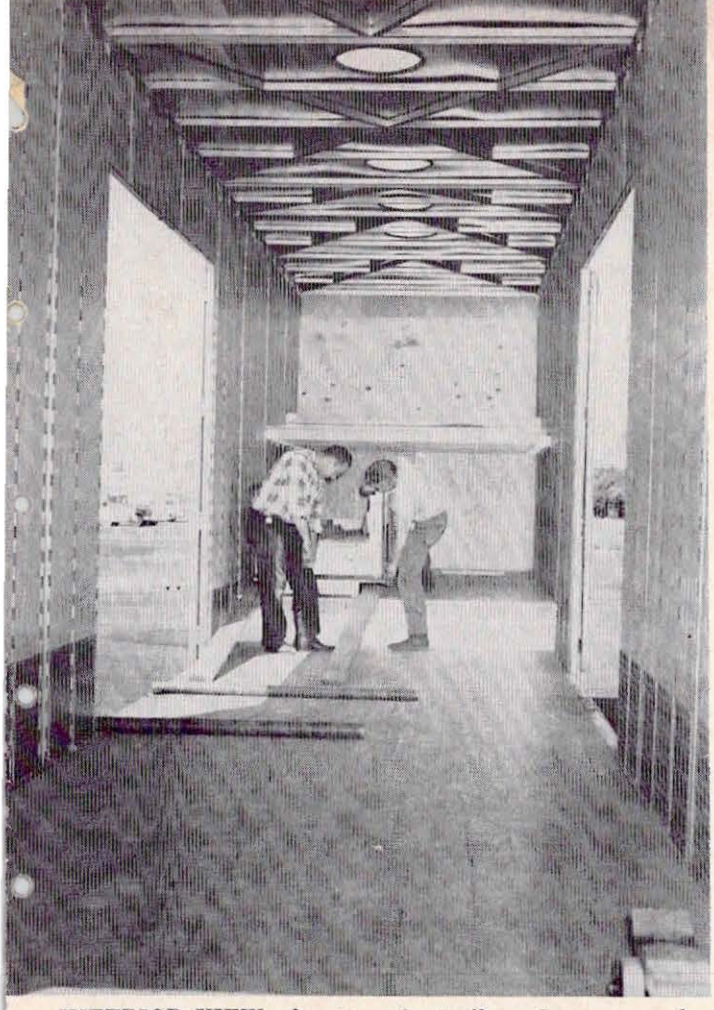
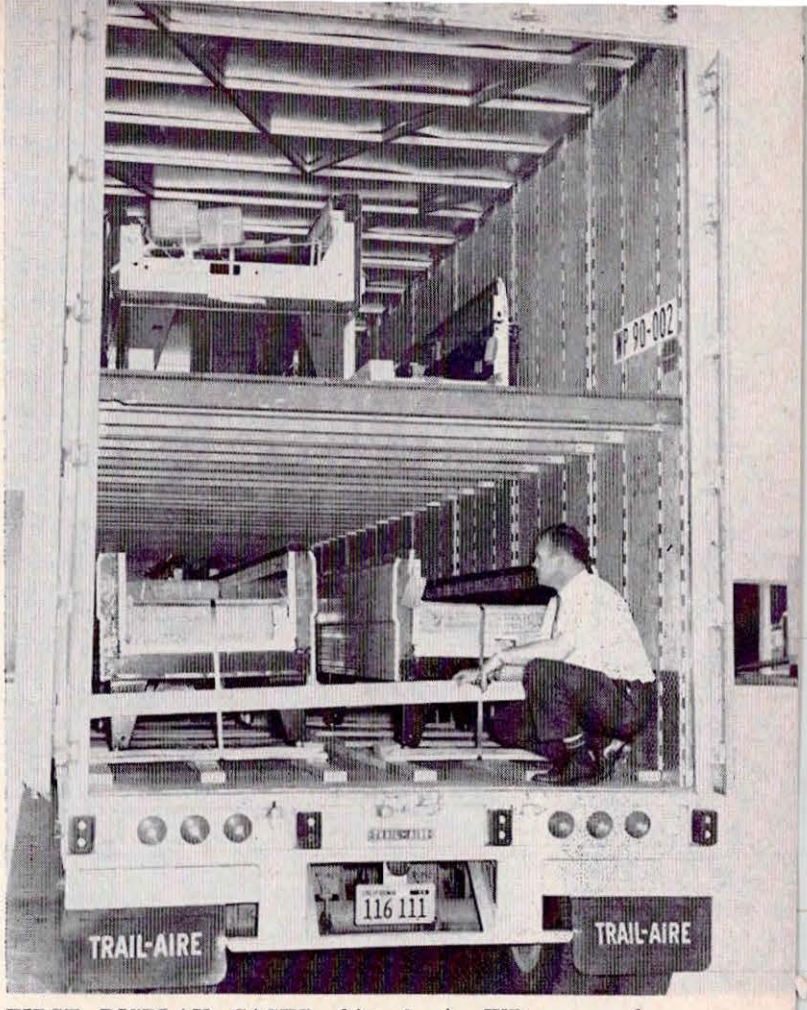
BETHLEHEM STEEL

BETHLEHEM STEEL



INTERIOR VIEW of super-cube trailers shows a number of design features: vertical belt rails, placement of intermediate deck, skylights in roof and double 9-ft side doors.



FIRST DISPLAY CASES shipped via WP super-cube trailers were loaded on two levels. Gus Karras, of the Major Store Equipment Co., Modesto, Calif., found no damage.

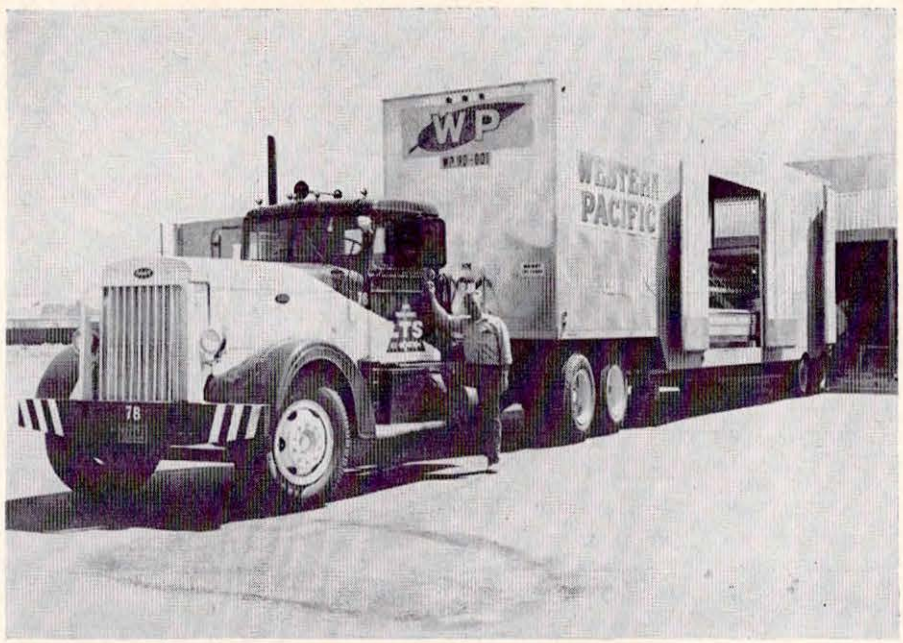
WP Uses 'Super-Cube' Trailers

Western Pacific's new "super-cube" piggyback trailers come close to being rubber-tired damage-free box cars.

Built by Trail-Aire, Inc., to specifications recommended by WP, the units were designed specifically to handle westbound movement of refrigerator show cases made by Hussman Refrigerator Company of St. Louis—but they're also suitable for any lading which requires a high degree of protection against damage.

Twelve fragile, porcelain-and-stainless-steel show cases made up the first load. They weren't crated; they weren't protected by blankets—and the entire load arrived on the West Coast undamaged.

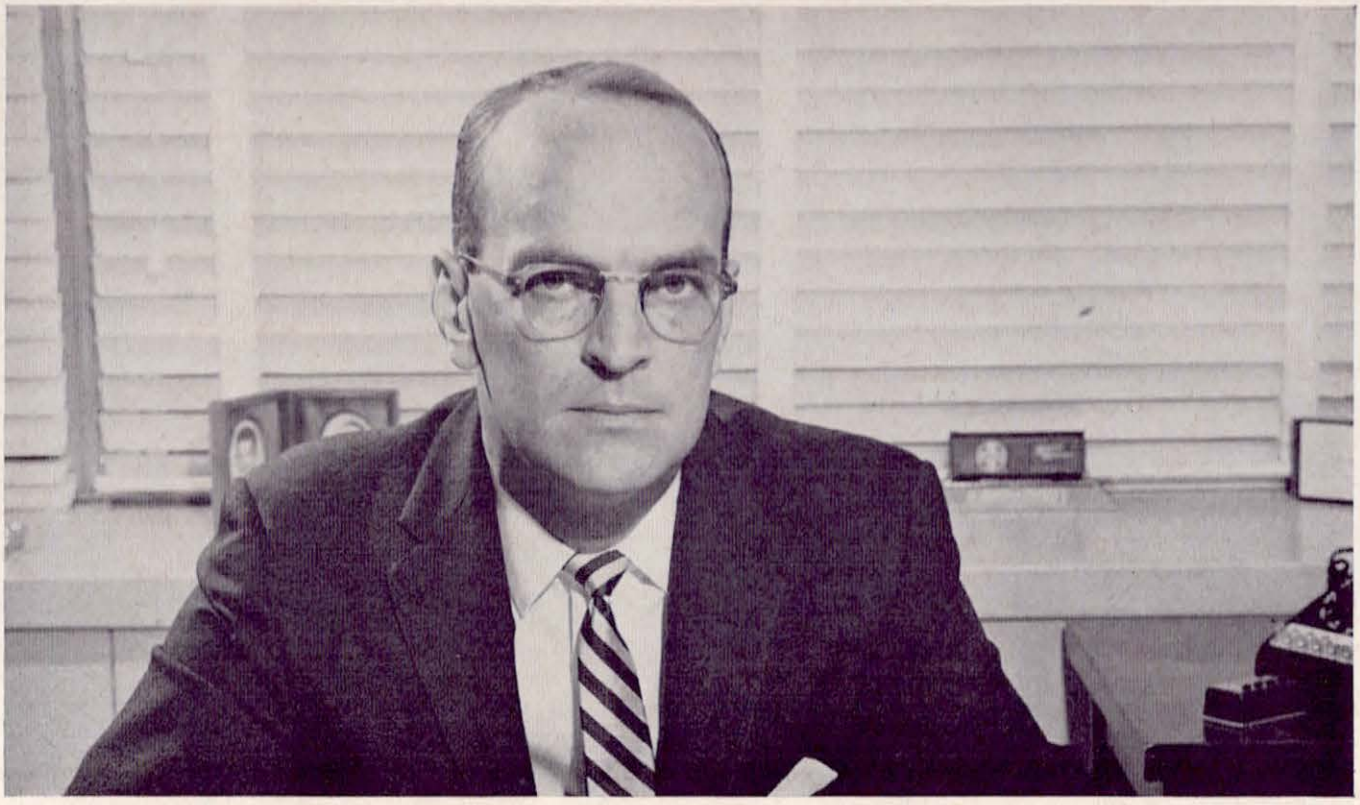
The trailers are equipped with vertical rails which accept load-dividing cross members at any height required to provide lading protection on two or more levels. A 92-in. rear door and two 9-ft side doors minimize loading-unloading problems. Capacity is 3,100 cu ft, or 22½ tons.



LOADING-UNLOADING OPERATIONS are simplified by trailer design featuring full-width, full-height rear doors and 9-ft outward-opening side doors located opposite each other. Trailer is 40 ft long, 13½ ft high.

WHITEHALL

RICHARD A. STUART
General Traffic Manager
Whitehall Laboratories



"Railway Age has always ranked in the top four publications I consider a must"...

"With the great volume of reading matter that crosses an industrial traffic manager's desk, one obviously must be selective as to what is going to consume his time. RAILWAY AGE has always ranked in the top four periodicals that I consider a must. The monthly Traffic Poll, Walter Taft's "Watching Washington" and particularly the Action Page are stimulating reading of the finest quality."

Richard A. Stuart

Milwaukee Rebuilds RPO Cars

The Milwaukee Road has placed two completely rebuilt RPO cars in service on its overnight "Fast Mail" trains between Chicago and Minneapolis-St. Paul. The cars feature improvements in design, better lighting and 1,032 letter separations for sorting mail en route.

First of the two 71-ft cars, which were converted at the road's car shop in Milwaukee, Wis., was named the Carl F. Rank, after the Milwaukee's retired manager of mail, baggage and express traffic. It is reported to be the only RPO car now in service on American railroads bearing the name of an individual.

Each car, when built by the Milwaukee in 1947, contained a 30-ft mail sorting section and a 41-ft baggage, express and storage compartment. The converted units are full RPO cars, with a 60-ft mail section and an 11-ft storage compartment.

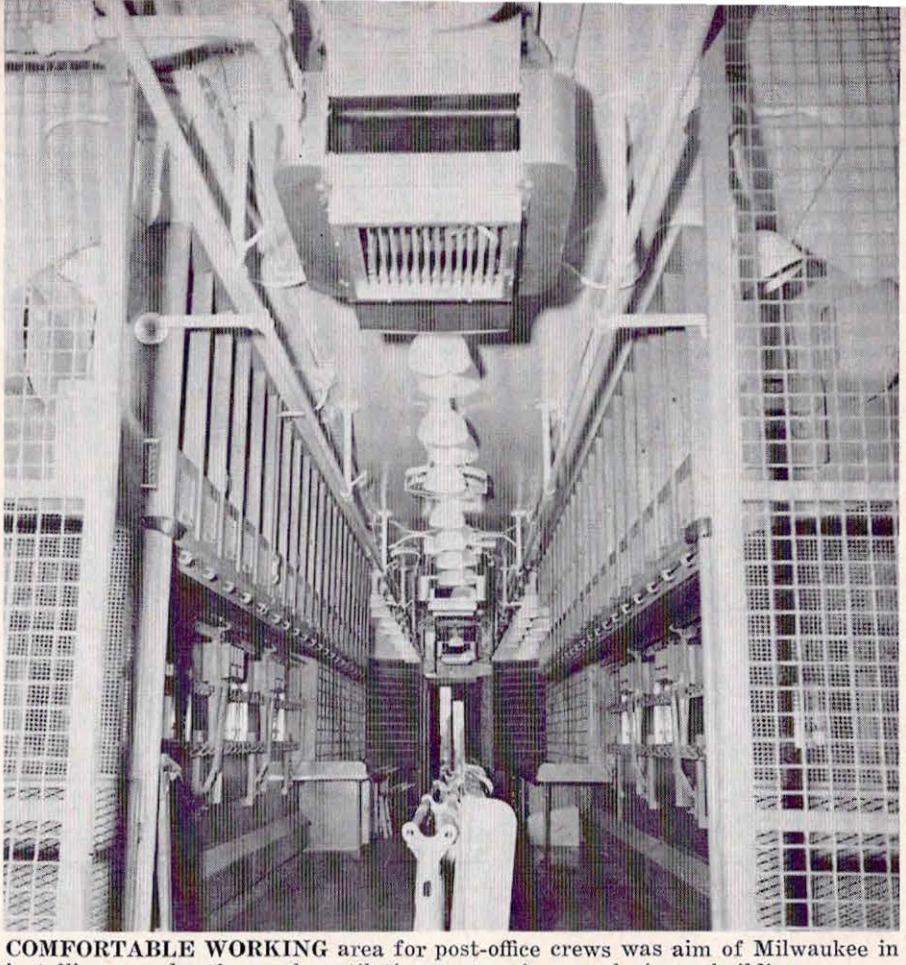
The Milwaukee car shop is now scheduled to convert two additional cars of the same type before the end of the year. In design, all the RPO cars will comply fully with latest Post Office Department specifications involving lighting, ventilation and mail-sorting facilities. Other features of the cars are electric water coolers, electric refrigerators, electric cooking units, and pressure-type water systems.

A major phase of the rebuilding was the improvement of the heating and ventilating system. Thermostatically controlled Vapor steam heating and power ventilation systems provide comfortable working conditions in all weather. The heating system furnishes warm water for washing, as well as tempered overhead and floor-line heating. The Vapor VR 935 overhead heaters in the mail compartment are installed between the side doors with ducts leading down to the tops of the openings. This arrangement directs a warm air stream down across the door opening while the car is being loaded, as well as when it is on the road.

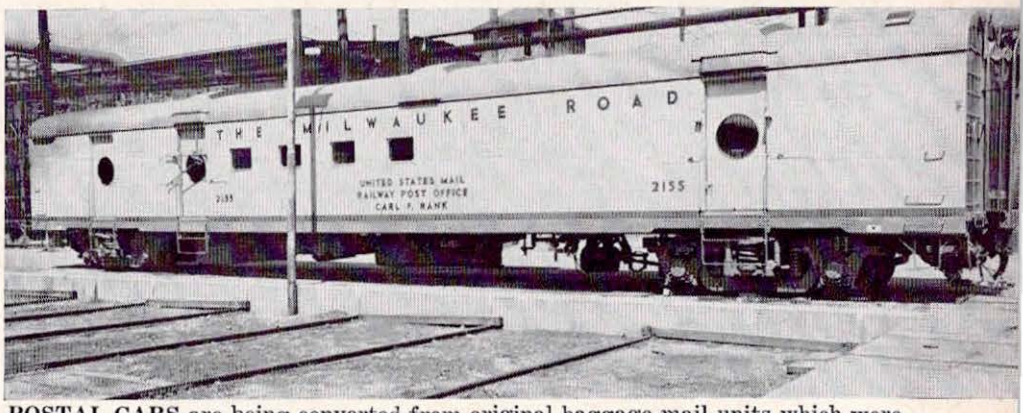
Each of the two separate heating zones in the mail compartment is equipped with a Vapor regulator and controlled by a mercury thermostat. The compartment is zoned from end to end instead of from side to side. Steam for the trainline is reduced to operating pressure through the 968 regulator and passes into the unit fin radiation at the floor line and into the overhead heater.

A check valve, set to open at about 3 psi, is downstream of the regulator, insuring a minimum of 3 psi available for wash water, even though the safe control valve may be energized by the thermostat. The return from floor heat radiation is piped back to the regulator, another feature of the 968 regulator. If it returns as steam, it touches off the regulator by expanding the thermostatic bellows, reducing the flow of steam to radiation. The regulator supplies only enough steam pressure to overcome the resistance of the radiation.

Steam under reduced pressure is supplied to an overhead heater through a manual valve in the 11-ft storage section. Power ventilation in the RPO section is provided by Vapor VF and VR 935 heaters equipped with reversible five-speed motors. In this 60-ft section, the VF 935 center unit without steam radiation is used to draw in fresh air, expel stale air or circulate car air. The two VR 935 units at the doorways, which have integral steam heating fins, distribute both heated and unheated air. Three fan speeds are available when the control is set for heating and two when the control is set for ventilation. Fresh, filtered air is drawn through louvered openings near the roofline on opposite sides of car.



COMFORTABLE WORKING area for post-office crews was aim of Milwaukee in installing new heating and ventilation system in cars during rebuilding.

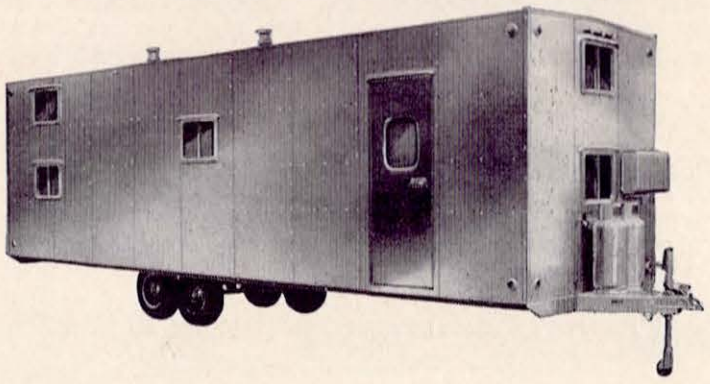


POSTAL CARS are being converted from original baggage-mail units which were built by the Milwaukee in 1947; cars have 11-ft storage compartment.

CampCars

CUT TRAVEL TIME

MULTIPLY WORK TIME



CampCars can house workers on the job, at the trackside, in comfort. By eliminating costly, time-consuming work crew commuting and high hotel bills, they will pay for themselves in ONE YEAR!

Several floor plans from which to choose. Full facts plus pictures for the asking. Drop a line today and get on your way to substantial cost reductions in railway maintenance.

Write us at 835 Englewood Avenue, Buffalo 23, N. Y.

INTERNATIONAL CAR DIVISION
MORRISON INTERNATIONAL CORP.

LONG ISLAND PROGRAM

(Continued from page 24)

state, subject to approval by the railroad and the New York Public Service Commission as to fitness of the bidder.

Not a small part of the negotiations is the advance planning for progressing the work with the least possible effect on normal train operation. Another key consideration is programming to dovetail jobs so that certain specially skilled crews, such as railroad signalmen and trackmen, will be available for each job as needed.

The more complicated projects, such as eliminations, not only require extensive flag protection for each piece of machinery, but have train directors (field train dispatchers) assigned to coordinate all construction procedures with train schedules.

Track and signal forces have not been augmented — and probably will not be — despite the magnitude of the operations under way and ahead.

Long Island's track work has been undergoing mechanization in the past several years. Machines already in use and on order will help make force increases unnecessary. Trained signalmen are in such short supply that qualified men probably couldn't be found, any way.

The payoff in careful advance planning has been almost no effect on normal train services. Temporary tracks around grade eliminations are laid in stone ballast, permitting speeds of 30 mph or more.

When it appeared a couple of years ago that the Floral Park project — involving elevation of four tracks and relocation of a complete branch-line interlocking to a point more than a half-mile away — might materially affect some diesel-powered commuter trains that normally held a 65-mph speed through the area, a unique test was run.

Flyers were put on all trains one morning, alerting passengers that a couple of mornings later their trains would be slowed to 30 mph through the area while train directors held stop watches on them to determine if the restriction would need rescheduling.

The test was a huge success. Only a few trains, normally running close together, were in any way affected. Notices then went out to all the passengers telling them of the results.

Flyers are also put on trains occasionally to report on progress of the elimination projects. They have helped give the LIRR what is probably the nation's largest group of rolling sidewalk superintendents.

THE MILWAUKEE ROAD

• **The Milwaukee Road** (Chicago, Milwaukee, St. Paul and Pacific Railroad Company) uses *Double-Cover* POLYCLUTCH lining in new center-discharge 4,000-cubic-foot-capacity covered hopper cars constructed by Pullman-Standard at Butler, Pennsylvania.

Now—one coat of Double-Cover POLYCLUTCH® lining gives equivalent dry film thickness of two-coat systems!

ONLY Pittsburgh's POLYCLUTCH gives you all these advantages:

• **Cuts labor costs,** because one coat does the work of two ordinary coats.

• **Cuts overspray loss,** thus reducing gallonage required per car.

• **Outlasts other coatings.** *Double-Cover* POLYCLUTCH is tough, flexible, protects against abrasion, impact, and repeated cleanings.

• **Applies quickly, easily,** with either airless hot or cold, or conventional hot or cold spraying equipment. Dries fast, too.

• **Saves time,** because you don't wait for a drying period between coats.

• **Cars come out cleaner,** because there's no need to enter them again to apply a second coat.

• **Speeds unloading,** because ladings slip and slide easily; won't cling to its hard, smooth, non-porous surface.

• **Eliminates contamination** losses, because it's non-toxic, tasteless, odorless, and has no effect on foodstuffs. Approved by the U. S. Food & Drug Administration.

• **For more information** on how you can save money and do a better job with this remarkable, *Double-Cover* POLYCLUTCH lining, write Pittsburgh Plate Glass Co., Industrial Finishes Division, 1 Gateway Center, Pittsburgh 22, Pa.

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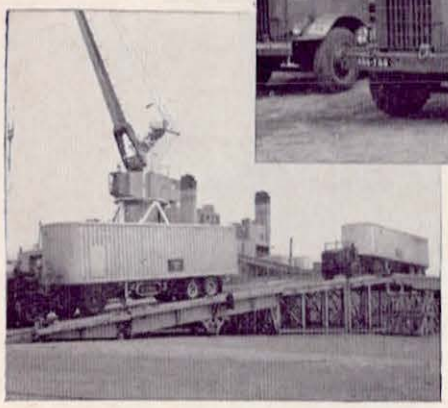
FLEXIBILITY is a big word



U. S. Army Trailers leased from Berman disembarking at St. Nazaire, France

. . . when you lease trucks from BERMAN

Berman *flexibility* recently satisfied the United States Army's immediate need for 75 trailers for their roll-on-roll-off operation to St. Nazaire, France. Berman completed the special modifications and met the delivery schedule specified by the Army.

By providing a pool of several thousand heavy duty trucks and trailers, Berman is able to meet such unusual peak demand loads, and supply matched fleets of almost any make or size quickly. This, plus half a century of experience and more than 50 well equipped terminals in major cities, gives Berman the competitive edge in FLEXIBILITY.

A Berman Lease offers these advantages:

- *Greater Experience*—from drawing board to finished vehicle—working with you on piggyback, over-the-road, or short-haul transport.
- *Properly Priced Leases* based on Berman's sound financing and efficient organization.
- *Superior Service* for your fleet with Berman's complete service facilities.
- *Equipment Flexibility* to meet your seasonal demands, with one of the largest heavy-duty truck equipment pools in the country.

Why not take advantage of Berman's greater flexibility next time you have a transportation problem?

Mail coupon today for new booklet "A Profitable Approach to Piggybacking."

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LETTERS

Industrial Development

Dallas, Texas

To the Editor:

I would feel remiss if I didn't write and offer congratulations upon the fine industrial development review contained in your Aug. 6, 1962, issue.

This special report was indeed well prepared. In fact, it is one of the best ID stories covering American railroads' participation in industrial development activities.

W. W. Renfro, Director
Industrial Development Department
Missouri-Kansas-Texas

Cincinnati, Ohio

To the Editor:

We read with a great deal of interest the article on industrial development in your Aug. 6 issue.

The Genesee & Wyoming is actively engaged in an industrial development program. At present we are in the process of taking an industrial resources inventory of the area in which we operate. This is being done with the cooperation of local town governments, educators, businessmen and the New York State Bureau of Industrial Development. The end result here will be the publishing of an attractive brochure complete with aerial photographs, etc., by the State Bureau of Industrial Development.

William H. Grove, Chairman
Industrial Development Committee
Genesee & Wyoming

'Scheme for a Take-Over'

Mendham, N. J.

To the Editor:

Your editorial of August 20, entitled "Scheme for a Take-Over," may have some foundation in fact, as it is probably true that there are quite a few people in the government who would like to see nationalization of the railroads, as they would even more with the affluent telephone companies and electric and gas utilities. What you fail to cover, however, is that the public, which gets its general impressions from riding passenger trains, is unfortunately rather fertile ground for those who say the government could do no worse, and possibly could do a better job. Having been rebuffed time and time again by uninterested management, surly train crews, and poor operating performance, small wonder that he listens to the siren song of nationalization.

[Mr. Richardson here cites a half-

dozen specific instances, both recent and historical, of inconvenient passenger service, inadequate dining car accommodations, difficulty of getting reservations in long-haul sleeping car trains, beds made up at the time of early-evening departures with no place for passengers to sit.—Ed.]

If these were new complaints, which have occurred only since the relative poverty of the eastern carriers, it might be more readily acceptable. But no, this has been going on for years and years, since I was just a kid, and I'm close to fifty. Like it or not the railroad industry is going to rise and fall in public esteem on the quality of its collective passenger service. If instead of throwing up their hands over this "terrible burden" they would try to find out what service really is, and then provide it, these government underlings to whom you refer might have less success in purveying the "glories" of nationalization. Removing passenger service completely won't help; it will only remove the railroads further away from the public which will ultimately accept or reject nationalization.

Management cannot learn what service is by riding in solitary splendor in office cars. The recipe for correction of service failures which one eastern railroader applied was a good one, although today it is rarely imitated. Without fanfare, he got out and rode the day coaches, and when he did the fur began to fly. Few railroads have ever matched the courtesy and service standards which were set by the president of that road.

Today there are only a few railroads which prove the merits of private enterprise to the general public. The hour is late—is it too late?

F. T. Richardson

More on Rapid Transit

Long Beach, Calif.

To the Editor:

Wilfred Sergeant, in Railway Age Aug. 20, provided a valuable addition to the study of standard and rapid transit operations on existing trackage. All of us probably will accept his conclusion which, rephrased, is: A full load of rapid transit superimposed on a heavy load of standard operations would be complex, though possible; perhaps impractical, and would require additional signaling at considerable cost.

This writer may be in the forefront of those advocating, not normally such an operation as Mr. Sergeant analyzed, but a "betwixt-and-between" type under mutual traffic densities where joint operations can be beneficial to all concerned, including public, labor, and stockholders.

Where there normally exists an intensive demand for trackage for one type of operation, a specialized facility is provided—tracks for freight or passenger car storage; freight classification; repairs; terminals, and even extra trackage for suburban operations or freight or passenger needs. Even in the situation theorized in this discussion, inner trunk operations could conceivably demand third and fourth tracks, which, if not exclusively for rapid transit, would be needed to help share the load of both standard and transit operations.

The crux of joint operation of high-speed trains is similar average speed. A freight train averaging 30 to 50 mph should not delay, nor be delayed by, rapid transit trains averaging 30 to 50 mph. The 30-mph example is easily visualized. The 50-mph example may incorporate some refinements. In such a case, when stations would be closer than the determinable critical distance apart, the rapid transit train would pull over to a station siding which may or may not require some length of lead track.

The crossover would be taken on high-speed switchpoints. The crossover and any necessary lead track would permit the overtaking of the rapid transit by a high-speed, through freight train. Tracks signalled in both directions also are helpful for runaround movements.

There are diverse definitions of rapid transit. I am visualizing a hybrid operation. Its operating distance would extend well into suburbia and even exurbia, without the closely spaced stations usually associated with metropolitan rapid transit. Frequent stations and trains cannot practically be superimposed on standard traffic on a double-tracked line; such service would require additional trackage for either exclusive or shared usage.

I am not visualizing the usual daytime frequency associated with rapid transit operations. The criterion here would be either a reasonably full trainload, or a frequency varying probably from not more than hourly to not less than 20-min.

Such yardsticks would achieve efficiency, and maximum opportunity for diverse freight movements.

Rush hour service is something else again. But this happens on every commuter railroad. Here freight operations are either suspended or reduced to a minimum compatible with numerous speedy passenger operations. Thus, a high-speed freight could proceed, but some switching movements might be suspended during traffic peaks.

To continue high frequency on a double-track line during a long-peak movement would require either some two-way signaling for overtaking on the other track, or a strategically located third track as a long passing track. To deny such commuter service on American railroads, or on certain rapid transit lines, simply because all crossings are not yet grade separated, does not seem realistic. In fact, such service provides the required public experience leading to eventual grade separation.

I am talking about an economical, hybrid service. Economy of time and manpower requires adaptations, even as economy of capital facilities favors shared usage under light or medium traffic densities. Time-saving favors the high platform for station loading, as Mr. Sergeant mentions. This, and efficient operations, favor turnstile fare collection, with train crew consisting of one motorman-engineer, and one trainman operating remote-controlled doors and available for rear-end duties as rarely required. Automatic train control would be part of any long-range passenger improvement program, even though the rigid standards of train crew physical fitness would be continued.

Exposure to a safe and attractive railroad service, for expanding numbers of people as well as for freight, is a public information avenue toward responsible public and legislative appraisal of the industry, with public and labor benefits in the form of economical traffic mobility in and between healthy urban areas.

The 7,000-ft braking distance for mile-a-minute freights mentioned by Mr. Sergeant lends itself to the density of joint operations being discussed here. In these cases signal blocks one-third this distance should be adequate, with double-light red-yellow and yellow-green aspects indicating Approach Medium and Approach Slow, as used on railroads in many metropolitan centers. Where maximum freight speed may not be desired for any reason, signal requirements could be simplified compatible with desired speed.

Such rapid transit presumes electrical operations, at least mosly so and in the long-range plan. As the service becomes appreciated and better patronized, not only would grade separation structures evolve, but specialized passenger subway extensions may extend into densely built-up sections and thus preserve and enhance civic values. Such electrification and joint usage is consonant with expressions by railway leaders who find favorable merit in studying the changing aspects of railway electrification.

Such public exposure may be necessary to prepare us to adequately confront problems of spiralling costs attributable to unbalanced transport and increasing congestion in air traffic lanes.

Robert J. Swan

PROJECTED VIEW of pressurized control compartment on GE's U25B locomotive is used by Wabash enginemen's instructor Merle H. Fulks (right) in diesel classroom. E. B. Winkelman, of GE's customer school unit, is at left.

Wabash U25B School Is Continuing Project

When the Wabash began taking delivery of a recent order for 15 General Electric U25B locomotives, it set up a school to instruct personnel in the operation and maintenance of the new 2,500-hp units.

Locomotive schools aren't new to American railroading. In the changeover from steam to diesel power that reached a peak in the late Forties most carriers participated in cooperative instructional programs with the major locomotive builders. Thousands of operating and maintenance personnel learned the ABCs of diesel-electric operation either in factory-based schools or aboard mobile instruction cars.

The Wabash training program on the U25B will be a continuing project. Concentrated at the outset on operating and maintenance personnel, the classes ultimately will be extended to cover division superintendents, trainmasters, and other middle-management personnel.

A. L. Veith, the railroad's manager of motive power and equipment says: "The Wabash approach to the training sessions is to unite the project, from the men who clean the locomotive to those who operate it, so that ultimately those even remotely tied to motive-power activity are familiar with the GE locomotives. We regard the program as an extension of our 'teamwork' approach."

When, in cooperation with General Electric, the Wabash started the U25B operating and maintenance school at Decatur, four days of sessions were held in a meeting room at the mechanical office building. The sessions were attended by trade and supervisory personnel from the maintenance department. The railroad's enginemen's instructor, Merle H. Fulks, of Decatur, was in charge, along with E. B. Winkelman of the customer school unit of GE's Locomotive and Car Equipment Department.

At Decatur, 46 enginemen received instruction in U25B operation, which included detailed descriptions of the locomotive's control devices through practical information on GE's wheel-slip-detection equipment, the U25B's air filtration system, and other data.

After the opening sessions at Decatur, the school moved aboard the Wabash's air-conditioned instruction car for its swing to Kansas City; Moberly; Detroit; Montpelier, Ohio, and back to Decatur. The instruction car spent two days at each of the divisional points along the 2,429-mile railroad before returning to Decatur. During its tour from Kansas City through Montpelier, 98 enginemen were introduced to the U25B.

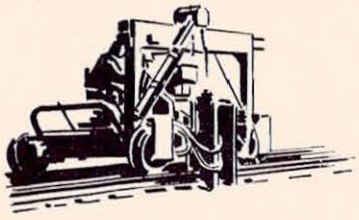
The Wabash began running its U25Bs between Decatur and Kansas City, but plans to extend the service to handle general merchandise service between Kansas City and Detroit, according to J. P. MacGregor, superintendent of locomotives. "When we get all 15," Mr. MacGregor said, "we plan to operate them in three-unit combinations on KB-(Kansas City-Buffalo) 2 and 6, on KD-(Kansas City-Detroit) 4, and on ADK-(advance Detroit-Kansas City) 1, DK-1 and DK-3. Maintenance will be performed at our recently modernized shop at Decatur."

The Wabash pools its new motive power, with an eye toward the greater utilization made possible by higher-than-average unit mileage and effective, regular maintenance. As an example, the U25B carrying Wabash road number 504, placed in service on June 3, was in the Decatur shop on June 13 for its monthly ICC inspection after making 3,420 miles in revenue service.

FAIR question on rail anchorage:

what happens

the second time around?

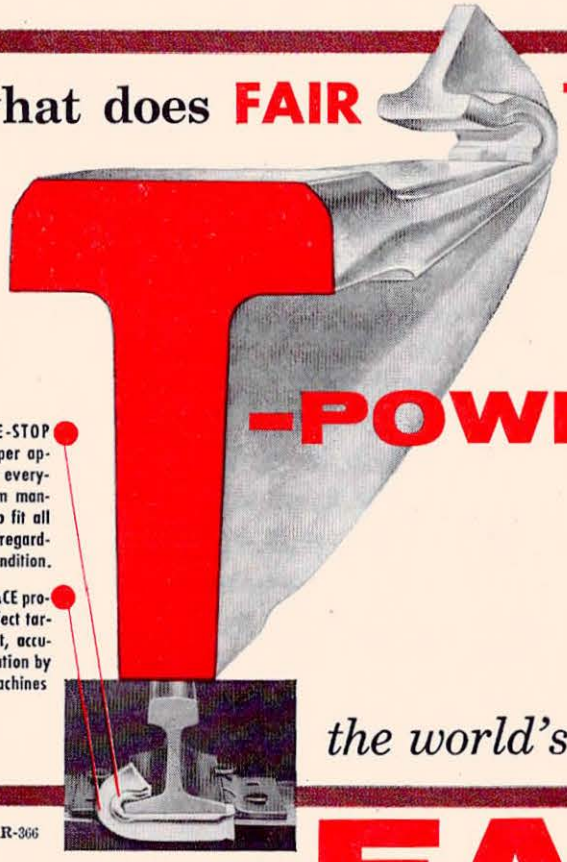


The original application of a rail anchor is often facilitated by the use of machines. *In adaptability to machine application, the IMPROVED FAIR* Rail Anchor is second to none.

But for maintenance and re-application, mechanization can be *a waste of expensive equipment and high-priced man-power.*

The IMPROVED FAIR Rail Anchor works equally well *with* or *without* a machine *or any special tools* . . . an ordinary spike maul does the job.

what does FAIR T-POWER really mean?


OVERDRIVE-STOP assures proper application — every-time. Custom manufactured to fit all types of rail regardless of condition.
STRIKING FACE provides a perfect target for fast, accurate application by men or machines

Certainly it refers to the broad, brawny-shouldered one-piece construction with more *bearing* area and more *gripping* surface — the power to control creepage.

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Interest Runs High In TOFC Probe

► **The Story at a Glance: Differing views as to the necessity for and proper scope of the ICC's piggybacking investigation have been expressed to the Commission by interested parties. The expressions came in statements filed last week, as requested by the Commission when it launched this Ex Parte No. 230 investigation by its order of June 29 (RA, July 9, p.7). Generally, the railroads and freight forwarders would have the investigation limited to avoid retrying the piggyback issues resolved more than eight years ago in the New Haven case. Truckers want the Commission to conduct the broad inquiry which seems to have been contemplated by its June 29 order.**

Some 25 railroads were among more than 50 interested parties which filed statements last week in the ICC's piggybacking investigation. The statements were due Sept. 4, and the next thing on the inquiry's program is a prehearing conference scheduled for Oct. 9. It will be conducted by Commissioners Herring and Tucker at the Commission's Washington headquarters.

Most of the railroad statements merely told the Commission what piggybacking services the respondent roads are now offering, but some included comment on issues involved in the inquiry. There was no presentation from the Association of American Railroads, but there were some from similar associations in other branches of the transportation industry, including American Trucking Associations, National Automobile Transporters Association, and Freight Forwarders institute.

As now set up, the inquiry could include reconsideration of determinations made in the New Haven case, the most important of which was the Commission's holding that transportation of freight in trailers on railroad flat cars is railroad transportation for which a trucking certificate is not required. And while the Commission's announcement said the inquiry "is not related to any pending legislation," it does embrace a matter dealt with in pending bills to implement President Kennedy's transportation message, i.e., the question of whether all other carriers should be permitted by railroads to use Plans III and IV piggyback service.

Plan III involves transportation on railroad flat cars of trailers supplied by shippers. Under Plan IV, flat cars, as well as trailers, are furnished by shippers. These services are now available only to shippers, including freight forwarders, which use them extensively. The Presidential recommendation is that they be extended to all carriers.

The other piggybacking plans, also embraced in the Commission's inquiry, are: Plan I, service offered to truckers under contractual arrangements; Plan II, railroad service in railroad equipment; Plan V, rail-truck service under joint-rate arrangements.

Most comprehensive of the railroad presentations received by the Commission last week was that of the Southern Pacific. As to Plan I, SP said railroads should have the right to select truckers to which it offers the service. Otherwise, the statement explained, truckers with rates lower than the railroad was offering under its Plan II service could divert traffic to Plan I which is less profitable to the railroad.

"Plan I," SP continued, "is a form of partnership, and it is essential to the relationship that each partner have confidence in the other. That confidence could not exist where the objective of one partner is to use the partnership as a device to take existing business away from the other. The privilege of accepting or rejecting requests for Plan I piggyback has not hindered its growth."

SP also emphasized its view that piggybacking services are best developed by collaboration between railroads and their own trucking subsidiaries. "The growth of our piggyback service," it said, "has to a substantial extent been dependent upon the responsive cooperation of our experienced highway motor-carrier subsidiaries, who maintain and dispatch piggyback trailers and provide prompt and willing pickup and delivery and line-haul to and from piggyback ramps coordinated with our expedited train schedules. There is no doubt that had Southern Pacific been compelled to rely upon an aggregation of independent motor carriers for the development of piggybacking, this transportation technique would be nowhere near so well developed as it is today, nor would shippers have available to them the prompt, coordinated service under all-rail responsibility which they have at present. . . . "

The Missouri Pacific, its statement said, "recognizes that certain abuses have developed in piggybacking." The statement went on to express MP's belief that "the five basic plans, as originally conceived, are sound in law and practice, and that the existing abuses can be corrected by the promulgation of appropriate rules and regulations."

The Frisco said the inquiry should not be permitted to become a sounding board for those "who seek to destroy this new, promising and popular method of transportation." This road's statement also said that many of the issues raised by the order of investigation "are presently before the Commission in other cases," and "orderly regulation does not require relitigation of those issues in a general proceeding such as this."

The Northern Pacific called piggybacking "a significant advance in the development of the nation's common carrier transportation system." The services meet requirements of its customers, NP also said, adding: "They yield vitally needed revenues which contribute substantially to the preservation and further improvement of the company's transportation system."

'Fishing expedition'?

The Atlantic Coast Line reported that it has observed Commission rules in conducting piggybacking operations. It anticipates, nevertheless, that there may be undertakings to make the case a "fishing expedition," and a retrial of issues decided in the New Haven case.

"Such dilatory tactics," ACL added, "could only result in adding to the uncertainty which has been created by the investigation order, not only within the railroad industry but among users of coordinated services."

The Western Pacific said piggyback services are "extremely important" to it. WP's statement also had figures which it interpreted as showing that shipper acceptance "is obvious."

ATA's views were in a joint statement subscribed to also by the National Motor Freight Traffic Association, the truckers' classification agency, and 12 truck-rate bureaus. The statement called for a "broad, comprehensive investigation" to bring "order to this chaotic area of transportation." The truckers want presentations in the case to deal with seven specific issues, as follows:

1. What is the nature of the operating rights that must be held by motor carriers in order to participate in Plan I, including the question of whether motor carriers may participate in such service where the motor carrier's route is circuitous with respect to the por-

tion of the rail route used?

2. The extent to which motor carriers, water carriers, express companies and freight forwarders should be permitted to use Plans III and IV. If so permitted, under what conditions and limitations?

3. What standards are necessary for determining the cost of providing or performing trailer-on-flat-car service?

4. What should be the relationship between rates for and services offered under Plan II, and the rates and services in connection with Plans III and IV, and what standards are necessary to assure that discrimination cannot arise when Plan II rates and Plans III and IV rates are offered for the same freight?

5. What standards are necessary—including publishing requirements—with respect to ancillary services such as loading, unloading and equipment leasing, in connection with Plans III and IV?

6. What standards are necessary to assure the maintenance of proper relationships among rates for various piggyback services, between piggyback service and non-piggyback service, and between piggyback service and the services of competing modes of carriage?

7. Do existing piggyback rates, ...s and practices unduly prefer un...ulated shipper associations and ...her freight consolidators over regu...ed motor carriers, and are regula...ons necessary to assure that piggy...ack service made available to such ...reight consolidators is equally avail...able to motor carriers?

Traffic figures asked

ATA and its affiliates want evidence in the case to include 1960 and 1961 piggyback traffic figures broken down to show loaded and empty movements of trailers, and which empty trailers were moved at railroad expense and which moved at tariff rates. Other evidence wanted by the truckers would show Plans II, III and IV rates and Plan I division arrangements on comparable traffic; the substantative provisions of contracts or agreements covering loading, unloading, equipment leasing, etc., between railroads, or railroad affiliates, and shippers utilizing Plans III and IV; and the tonnage moved under piggyback rates for forwarders, shipper associations and other consolidators, broken down to show the tonnage for each company or association and the tonnage under each piggybacking plan.

The Regular Common Carrier Conference of ATA filed a separate statement urging the Commission to go as far as it can in promoting the establishment of "permanent" Plan I services at reasonable rates.

Another statement came from ATA's Contract Carrier Conference. It said service under Plans III and IV "is directly competitive with the type of service performed by contract carriers in that it allegedly is a substitute for private carriage." With this "substantial interest" of its members noted, the conference went on to say that "unless proper rules and regulations are established in connection with all phases of TOFC service, the contract carriers, who are circumscribed by various rules and regulations of the Commission, will be placed at a competitive disadvantage in competing for traffic moving in private carriage."

As to Plans III and IV, the conference thinks they should be outlawed. If they are continued, it wants rules to prohibit the leasing of trailers and flat cars by railroads. It also wants Plans III and IV open to truckers under conditions like those which now apply in connection with their use of Plan I. The conference explained that this would give the truckers a better break than they now get under the Plan I service which railroads are free to offer or withhold.

The National Automobile Transporters Association said its members want to retain freedom to participate in the transportation of new-automobile traffic, "which they have historically enjoyed," at least to the extent of retaining "that portion of the transportation requiring highway movement." The auto carriers also want no differentation as to their "rights" between railroad piggyback operations and multi-level-car service. They want freedom to substitute railroad service for highway service, and freedom to use "all ramp-to-ramp" rail rates, and to enter joint rates with the railroads.

The Freight Forwarders Institute said it is unable to understand "what the Commission expects to accomplish as a result of this proceeding." As to trucker use of Plans III and IV, the institute said that "such carriers may not utiilze such rates for the reason that they do not have that 'quality of character' which would enable them to function as a 'shipper' and as a 'carrier' in relation to the same undertaking."

The Commission itself, the institute continued, has passed upon this question on numerous occasions, and has "characterized such a relationship as 'repugnant to the Act'." In such a situation, the institute thinks Congress is the one to decide whether the "repugnancy" should or could be removed under the Constitution.

Editors Afield

Labrador City, Nfld.—Upon observing the Iron Ore Co. of Canada's crewless freight train operation in western Labrador (RA, Sept. 3, p. 12), several visitors (including this writer) concluded that the job of hauling 55,000 long tons of ore per day could not have been accomplished by manned trains. For example, a train is inched along at ⅛-⅜ mph when being loaded with ore. It is doubtful if an engineer could consistently inch the empties under the loading pockets with the precision of the automatic operation. Similarly, at the dumping site where ore is unloaded into the crusher, the cars are automatically spotted. If crews were used, a minimum requirement would be a locomotive engineer and a man on the ground to signal the engineer when spotting the cars.

"This type of train operation is bound to come," commented a railroad officer who saw this Labrador installation. Not only is it applicable to bulk movements such as ore or coal, but it might well be used for operating mainline freight trains between major terminals.

The ore trains are operated push-pull with the GP-9 1,750-hp locomotives (made by General Motors Diesel Ltd. and not Montreal Locomotive Works as incorrectly reported in the Sept. 3 article) hauling loaded trains down to the crusher and pushing the empties back to the loading site at the mine. To alert personnel of a train's approach, headlights on the locomotive and tail car are lighted continuously. Also, the locomotive bell rings continuously and yellow revolving beacon lights atop the locomotive and tail car are lighted.

The only time the locomotives will be taken out of service is for refueling and inspections or other servicing. A red "emergency stop" pushbutton is mounted on each side of the locomotive and may be operated by a person on the ground. A red indication lamp is lighted when this pushbutton has been operated. Alongside the red button is a black pushbutton which when operated places the locomotive on automatic control.

—Robert W. McKnight

ONLY OFF-LINE MEMBER of L&N's new piggyback sales organization, James H. Vaughn (left), district piggyback representative at Chicago, inspects new L&N equipment at C&EI's Chicago TOFC ramp. Shown with Mr. Vaughn are (l to r) C. G. Lignon, supervisor motor service, C&EI; E. C. Myers, general agent, L&N; C. C. Vaughn, traffic manager, L&N, and H. L. Bateman, general manager, Terminal Freight Handling Co., a Sears. Roebuck Co. subsidiary.

FINAL STOP in a week-long orientation trip for L&N's nine district piggyback representatives was New Orleans. Pictured at loading ramp are (back row l to r) W. T. Walling, DPR, Birmingham; D. F. Jones, manager piggyback sales & service; F. A. Reppel, DPR, New Orleans; C. E. Thomas, assistant manager, piggyback sales & service; W. S. Gahan, DPR, Louisville; R. F. Summerville, DPR, Atlanta; W. R. Allred, DPR, Nashville; J. H. Vaughn, DPR, Chicago; J. E. Power, DFA, New Orleans; (front row) P. W. Hansell, DPR, Memphis; L. E. Estill, DPR, Cincinnati, and L. H. DeMoor, DPR, St. Louis.

How L&N Pushes Its Auto-TOFC Traffic

► **The Story at a Glance: To promote its mushrooming piggyback and autorack traffic, Louisville & Nashville has set up a system-wide sales organization to service this traffic exclusively. Nine district piggyback representatives, hand-picked, are to act as trouble shooters and consultants to traffic men in L&N field offices. They are the nucleus of this new sales organization (RA, May 14, p. 35).**

As part of the training for their new assignments, the nine piggyback representatives were given a "cram course" in piggybacking.

Louisville & Nashville's combined piggyback and autorack traffic, running well ahead of estimates, is expected to produce revenues of $10.8 million this year. That's nearly double the $5.5 million such traffic grossed in 1961. It represents a sixty-fold increase during the last five years.

To keep up with this phenomenal growth, field assistants, trained as specialists in promoting piggyback sales, were needed to augment the work of regular freight traffic agents. A year-long study led to the development of a system-wide organization devoted exclusively to piggyback and autorack traffic. Earlier this year the nucleus of this organization was formed with appointment of nine district piggyback representatives.

David F. Jones, L&N's manager of piggyback sales and service, considers the newly appointed "piggyback reps" as trouble shooters and consultants to other freight salesmen in each district. "These district piggyback representatives," he says, "will spend all of their time on piggyback sales. They are no longer simply freight solicitors nor are they confined to one city. Each will take in an entire region and be consultant to our regular field men. For example, Jim Vaughn, while assigned to Chicago, can assist our salesmen in Milwaukee, Minneapolis, Peoria, Indianapolis or Omaha on anything concerning piggyback or autorack traffic."

All the new district representatives are former L&N freight traffic agents who have been working with TOFC sales for the past four or five years. Each is familiar with L&N operations and was carefully selected for assignment to the new piggyback force.

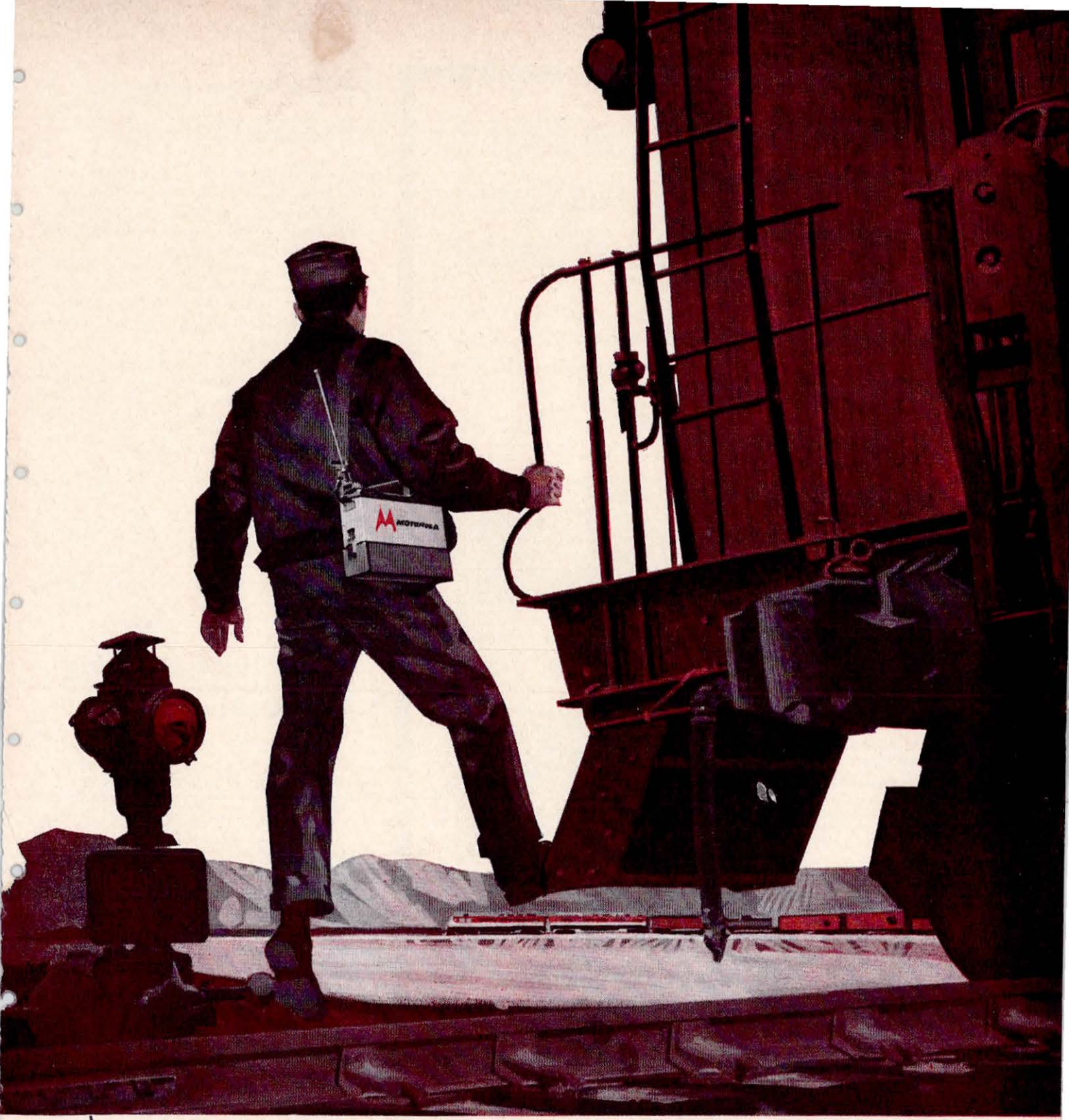
First step in orienting the district piggyback representatives to their new assignments was a week-long tour of all major L&N terminals. For the tour, L&N business car No. 350 became a school house on wheels for a cr course in piggyback transportation. T group inspected facilities at Louisvi Cincinnati, Atlanta, St. Louis, Nas ville and New Orleans.

During the tour, informal semina were conducted each evening while th men were en route to the next stoppin point. Some meetings included talks on piggyback rates and service requirements and equipment needs. Other sessions were devoted to marketing techniques and sales psychology.

James H. Vaughn, the new DPR (district piggyback representative) at Chicago, says the orientation trip helped him see more clearly the operating department's problems. "This tour made me realize more than ever the need for close cooperation between the operating and sales departments."

William S. Gahan, DPR at Louisville, believes the meetings with local operating personnel at various terminals were as important as the evening seminars and "will result in a better understanding of what's required to promote the growth of piggyback traffic."

L&N is backing up its new piggyback specialists with a continuing program of improving terminal ramps and facilities. In the year ended July 31, 1962, expenditures for new and expanded TOFC ramps totaled $350,000 and additional facilities are being considered "wherever traffic justifies."



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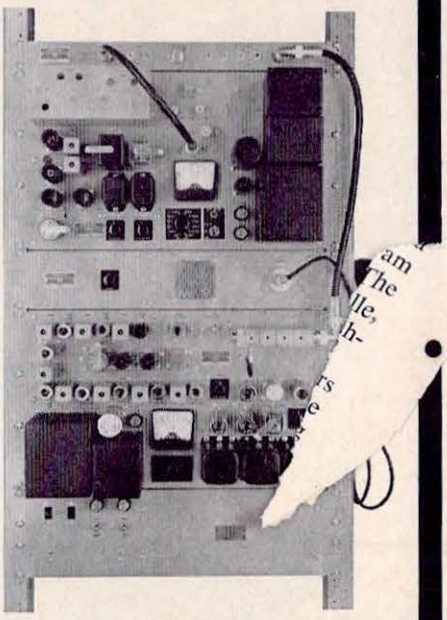

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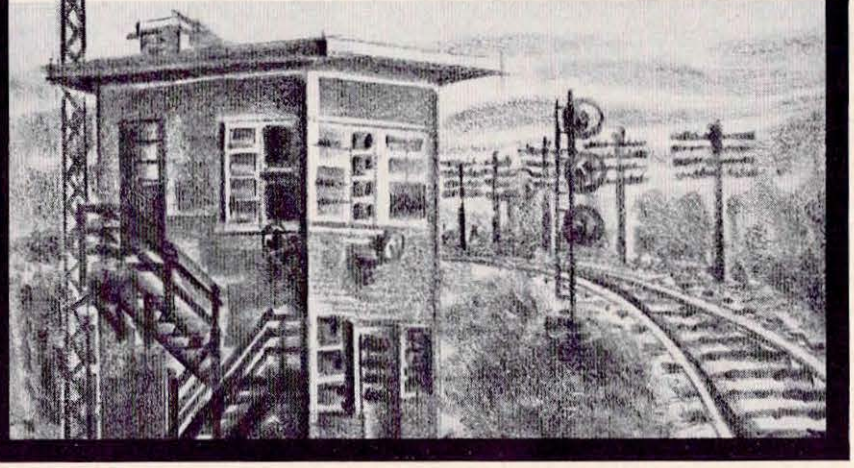


Switchmen File Benefit Demands

The Switchmen and the carriers are headed for the bargaining table again —less than a month after SUNA members ratified a wage agreement to end a three-year dispute.

This time wages won't be at issue. SUNA is demanding a health and welfare plan, wholly financed by the carriers. Specifically, the union is asking the railroads:

- To provide life insurance for each employee which would pay, upon his death, an amount equal to his full-time earnings at the rate of pay of the last position held before his death (minimum $5,000 payment).
- To provide all hospital, medical and surgical care "incident to any sickness, injury or other disability of any employee, spouse and-or other dependents, including children under 18 years of age."
- To pay in full all costs involved in setting up the life and hospital-medical-surgical insurance programs.

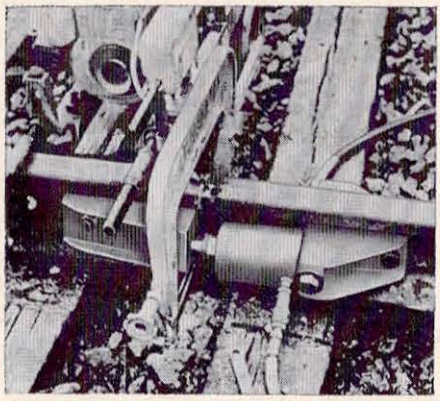
Agriculture Wasting Distribution Dollars?

"Even modest attention to physical distribution can greatly enhance profit opportunities" in agriculture, Dr. E. W. Smykay of Michigan State University told the American Institute of Cooperatives at its recent annual meeting (RA, Aug. 20, p. 31).

"The possibility of applying physical distribution principles to farm problems, however, is nil," Dr. Smykay said, "so long as production holds center stage in agricultural thinking. The first focus of any physical distribution program requires that attention be fixed on the market for products and not solely on their production. Once the gap in present thinking is eliminated, new and more productive distribution systems can be designed."

Physical distribution, as defined by Dr. Smykay, "is the proper placement of the proper assets at the proper time," and includes transportation, inventory control, materials handling and packaging. He estimated the "largely uncontrolled" cost of such functions for American agriculture at $20 billion—including in that figure "waste, inefficiency and reduced profit opportunities in an industry facing decline in margins due to reduced prices and increased costs," while attention of agricultural experts is centered on raising productivity of "labor, machines and chemicals in production processes."

NEW PRODUCTS REPORT *(Continued on next page)*



Rail Expander (RA-1)

A hydraulic rail expander is now available which is designed for expanding a string of continuous welded rail while it is being cut prior to installing a joint. Designated the Model RE60 Simplex Rail Expander, the device has a capacity of 60 tons. It consists of two 30-ton, 4 7/16-in. diameter rams with a threaded saddle and a hand pump. It provides a travel of 2½ in. and a screw adjustment of 3 in. *Templeton, Kenly & Co.*

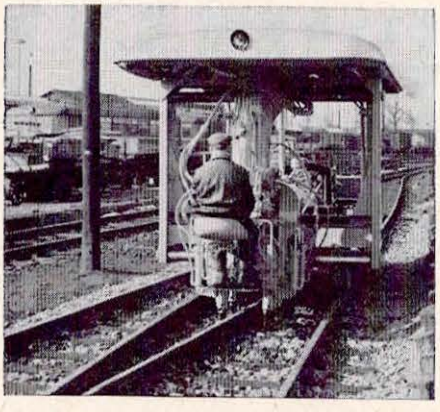
Switch Heater (RA-2)

Consisting of three basic components —boiler, pump and rail heating plates —the new R-H-T switch heater is claimed to remove all of the snow from around a switch or switches and to evaporate from the roadbed all of the water resulting from the melting snow. The device heats the rails by means of a heat transfer fluid which is circulated through pipes between the boiler and the rail heating plates. The latter, which are constructed from cold-rolled steel and coated with a corrosion-resistant paint, are inserted in the cribs under the rails and are specially designed to utilize the principle of radiant heating.

The boiler, pump, boiler controls and expansion tank are unitized in a small sheet-metal building which can be located close to the switch or switches. In addition to heating the rail, the manufacturer says the heater has the ability to increase ground temperatures, even during temperatures of -10 deg F. The R-H-T can be operated on propane gas, natural gas or oil. *Metal Industries, Inc.*

Truck Crane (RA-3)

Equipped with flanged-wheel attachments, the P&H Miti-Mite 105B-TC truck crane is said to have a travel speed up to 35 mph on the rails. It is manufactured by Harnischfeger Corporation but is sold to railroads and serviced throughout the United States by Matisa Equipment Corporation. The crane has a 30-ft basic boom and a hook block capacity of 9 tons but optional equipment will raise the capacity to 12.5 tons. *Matisa Equipment Corp.*



Tamping Machine (RA-4)

To meet the demand for a special machine for tamping through switches and crossings, the Plasser Points and Crossing Tamping Machine WE75 has been made available. This is a one-man-operated unit using the pressure-vibration principle of tamping. The tamping head, raised and lowered hydraulically, is suspended ahead of the front axle in a separate frame of two vertical pillars.

The frame carrying the head is hung on two horizontal beams thus making the tamping head adjustable over the length of the tie where it can be set exactly over the rail or point where the tamping is to be done. The tamping head consists of four tamping tools. These can be moved close into or away from the rail, this movement being variable up to a maximum angle of about 15 deg. The movement of the tools is effected hydraulically. The Points and Crossing Tamping Machine can be provided with set-off equipment for hydraulically lifting and turning the machine. *Plasser Railway Maintenance Corporation.*

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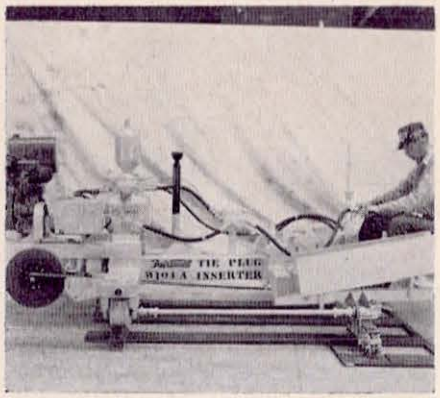
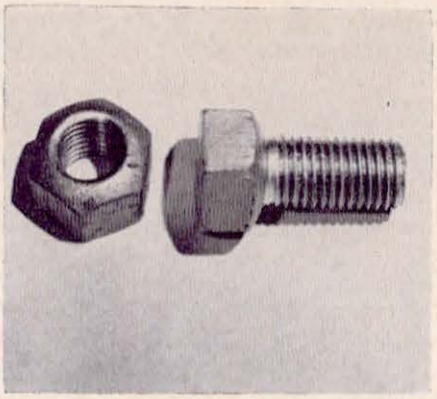


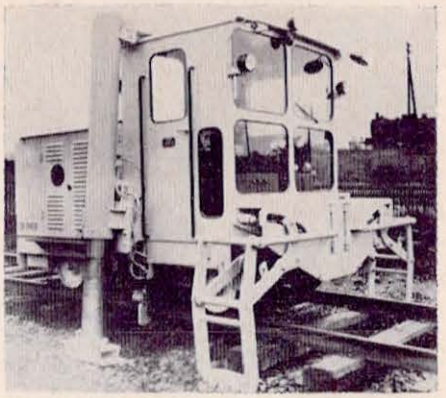
Tie-Plug Inserter (RA-5)

Several improvements have been made to the Fairmont W104 Tie Plug Inserter. To give better traction, one of the support wheel assemblies has been replaced by a crawler tread that is driven at the same surface speed as the rail wheels. Another improvement to the machine is an addition to the hydraulic circuit that is claimed to insure positive timing between the shear and driving cylinders. *Fairmont Railway Motors, Inc.*



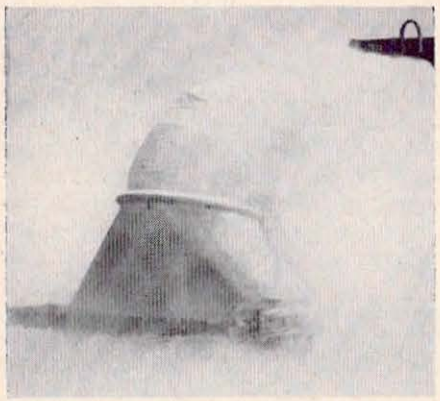
High-Strength Bolt (RA-6)

Assembly time of Armco Multi-Plate structures is claimed to be reduced 10% when a new high-strength bolt is used. A significant change from the previous bolt design, which had a multi-curved head, is the uniform roundness of the underside of the head of the new bolt. This roundness is stated to permit the bolt to drift the corrugated sections together for rapid assembly. *Armco Steel Corporation, Metal Products Division.*



Tamping Jack (RA-7)

Track lifts up to 14 in. are said to be possible with a new machine designated the Jack Pack which is being introduced in this country. This is a hydraulically operated machine equipped with side jacks that lift the machine and track to the desired elevation, after which side packers then push and consolidate the ballast under the ties. The unit is said to work at the rate of 700 ft of track tamped per hour. *Matisa Equipment Corporation.*



Snow Blowers (RA-8)

Two new models have been added to the RMC line of snow blowers. Known as the Typhoon and Hurricane models, they supplement the previously available skid-mounted and wheel-mounted Cyclone models. The new units are self-propelled and deliver higher wind forces for snow removal than the 115-mph force of the Cyclone machines.

The Typhoon directs a 160-mph wind at the track while the Hurricane delivers a 234-mph force. The Typhoon snow blower is equipped with a 50-hp, air-cooled gasoline engine and is propelled by a hydraulic motor. The snow nozzle is 3 in. by 72 in.

The Hurricane unit is powered by a 212-hp diesel engine and also has a hydraulic drive system. This machine has a 4-in. by 84-in. snow nozzle and has adjustable flaps for narrowing the 4-in. opening and changing the direction of the flow.

Both the Typhoon and the Hurricane machines have a steel chassis with 16-in. rail wheels and are equipped with enclosed, heated operator's cabs. *Railway Maintenance Corporation.*

Nuclear Switch Lamp (RA-9)

A nuclear-powered switch lamp, known as the Isolite, is available. It is designed to provide ten or more years of service-free operation, other than wiping, without the use of an external power source, batteries, bulbs, cables or fuel.

The lamp is manufactured by the U. S. Radium Corporation and distributed on an exclusive basis in the United States by Adams & Westlake Co.

The bases of the new lamps are designed to fit the switch-stand tips of any railroad and to be structurally interchangeable with all kerosene or battery-operated lamps now in use. The Isolite switch lamp contains four light sources within its housing. These sources are constructed of heavy, radiation-resistant cerium glass windows soldered into metal casings. Within each casing, specially selected radiation-responsive zinc sulfide phosphor crystals are excited to the desired color and degree of luminescence by Krypton 85 gas.

Lenses for the lamp are available in green, amber, red or lunar. *Adams & Westlake Co.*

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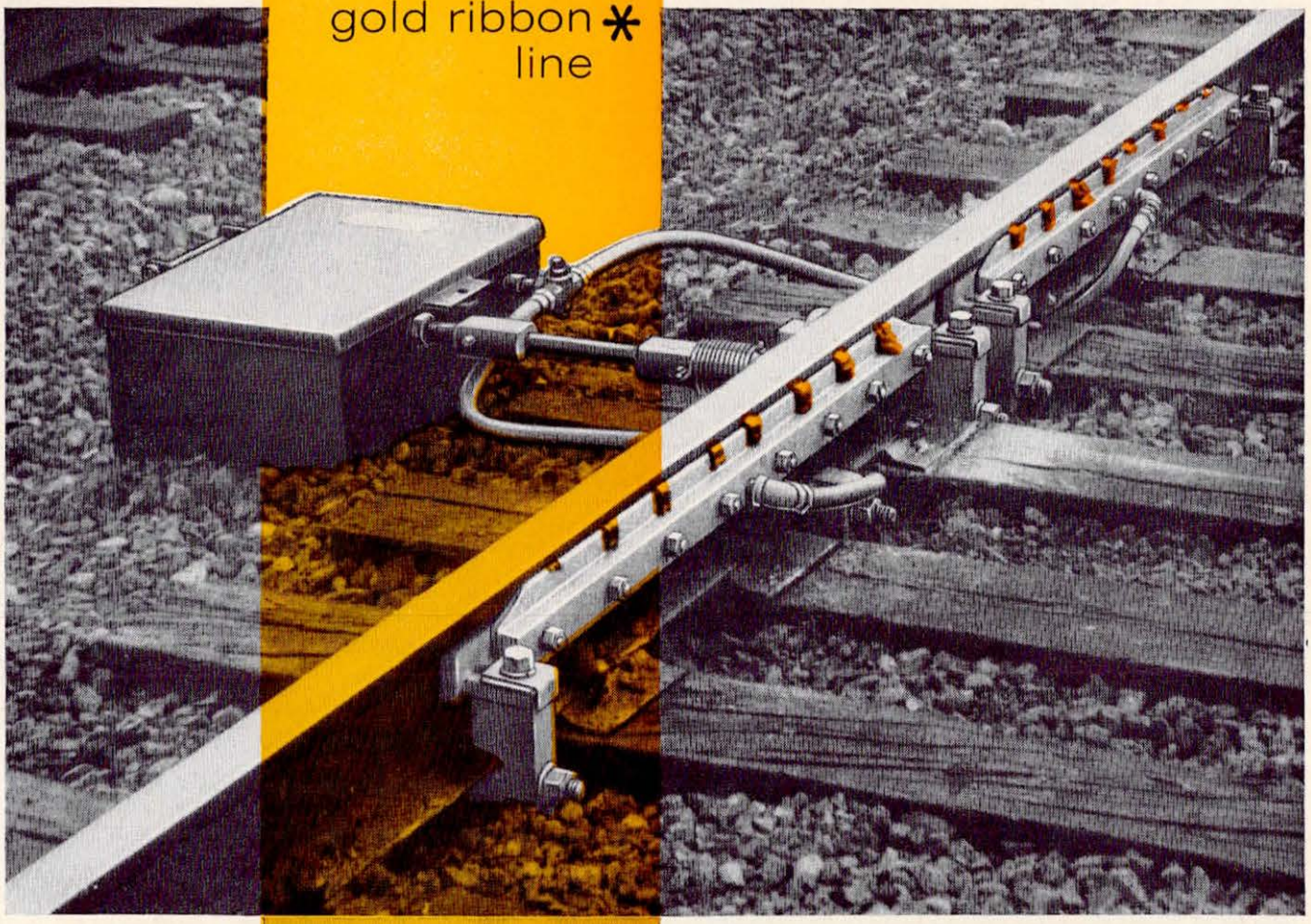

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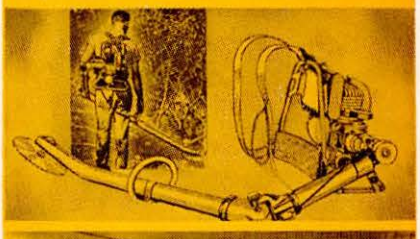

HIGH-SPEED BRUSHCUTTER

MACK, REVERSIBLE SWITCH POINT PROTECTOR

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gives dependable care-free lubrication everywhere it's needed, automatically

In modern railroading *every*where includes; grades, switch points, guard rails and running rails, as well as curves — *Every*where that friction-forces are at work, new "advanced design" MECO lubricators will reduce friction to a whisper. *Quadruples* the life of rails and wheel flanges!

MECO lubricators cost less to install—Attach to standard rail without special preparation. Once installed, a wheel-activated mechanism dispenses just the right amount of grease through the even-flow distributing bars directly to the rail and wheel flange for waste-free, care-free lubrication, automatically.

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UNIFRATE* VARIABLE LOAD BRAKE

The NEW ASF Unifrate Brake for freight cars is the lightest design approved by the AAR for limited application. Compact and truck mounted, it is a variable load brake designed for operation with maximum efficiency and corresponding low maintenance. Brake forces increase in proportion to the loads applied to the car. Elimination of the body cylinder and body brake permit under car space savings.

Power is provided by air actuated rolling diaphragm brake chambers, supported below the bolster by hanger levers which abut AAR-approved American Steel Foundries cast steel Unit® Brake Beams. Brake heads are equipped with Anchor® high friction composition shoes.

Furnished ready for application, the ASF Unifrate Brake is designed primarily for new cars. However, it can easily be installed on standard freight car trucks which have Unit Brake Beam pockets.

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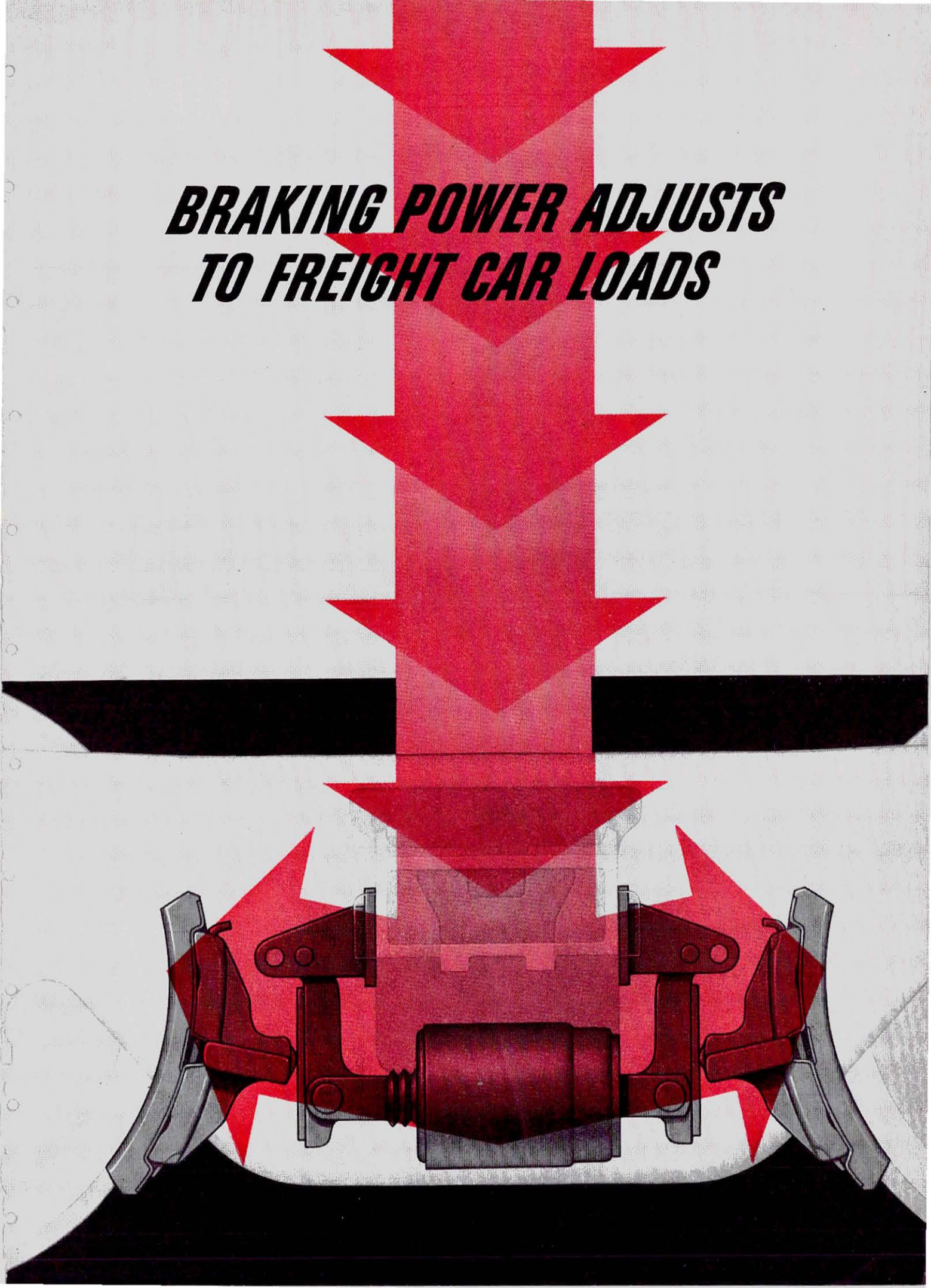

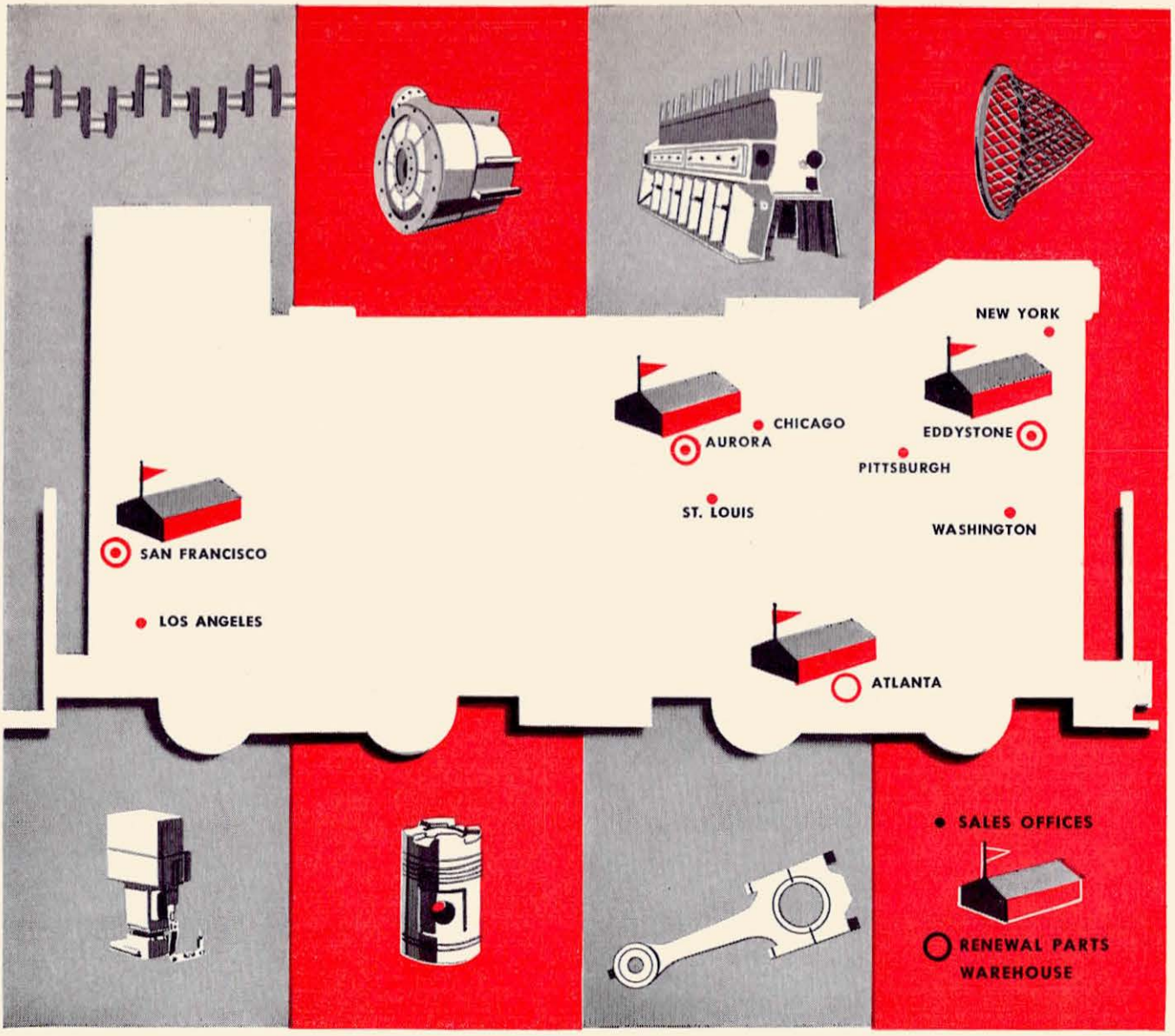

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Market Outlook

Carloadings

Loadings of revenue freight in the week ended Sept. 1 were not available as this issue went to press.

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended Aug. 25 totaled 14,048 cars, compared with 11,812 for the corresponding 1961 week. Loadings for 1962 up to Aug. 25 totaled 450,689 cars, compared with 372,779 for the corresponding period of 1961.

IN CANADA.—Carloadings for the seven-day period ended Aug. 21 totaled 72,824 cars, compared with 72,017 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
Aug. 21, 1962	72,824	20,098
Aug. 21, 1961	72,023	22,265
Cumulative Totals		
Aug. 21, 1962	2,248,822	772,472
Aug. 21, 1961	2,170,915	783,505

New Company Formed To Build Ultrasonic Cars

Railroad Industrial Service Co. has been formed as a subsidiary of Chemetron Corp. to produce ultrasonic metal-testing equipment. Robert A. Baer has been named president of the new company. Offices are located at the headquarters of the parent company, 840 North Michigan Ave., Chicago.

According to Mr. Baer, the first equipment built by the new firm will be cars for detecting flaws in rails. The detector cars will be railway-highway units capable of operating on the highways as well as the rails. They are said to be the first commercially available ultrasonic cars to use cathode-ray "memory tubes" to present information on flaws. The tubes' screens are said to retain an image long enough to permit careful analysis and interpretation of the information presented.

Patents and manufacturing rights for the ultrasonic cars have been acquired from the inventor, Ivan L. Joy, electronics engineer connected with the Santa Fe, according to an announcement. In developing the equipment, Railroad Industrial Service Co. "will refine the concept and make use of fully transistorized circuitry to achieve" superior flaw-finding ability, according to Mr. Baer.

New Equipment

PASSENGER-TRAIN CARS

► *Budd Co.*—Ordered 38 sets of type EL cab signaling equipment from Union Switch & Signal division of WABCO for installation on Budd electric cars to be placed in commuter service in the Philadelphia area. The cars are being purchased by the City of Philadelphia and are to be leased to the Pennsylvania.

PIGGYBACK

► *Fruit Growers Express.*—Ordered 200 piggyback trailers of 2,100-cu-ft capacity with aluminum shells, foamed-in-place polyurethane insulation and underslung mechanical refrigeration units. This order, second 200-unit order placed in 1962, will bring FGE trailer ownership to 935, representing an investment of almost $14 million made in the last two years.

► *Trailer Train Co.*—Has sold $9,600,000 of 20-year equipment-trust certificates, Series 1, to finance not more than 80% of the $12-million estimated cost of at least 844 flat cars to be acquired for lease to railroads for use in piggyback service. With addition of these cars, Trailer Train, which is now owned by 34 railroads and one freight forwarder, will have a fleet of approximately 11,500 flat cars. The certificates, dated Sept. 1, were awarded to a group headed by R. W. Pressprich & Co. of New York at a price of 98.64, with interest at 4⅝%, making the average interest cost 4.755%. Final maturity of the issue will be Sept. 1, 1982.

SPECIAL

► *Burlington Truck Lines.*—Ordered 500 40-ft aluminum trailers at a total cost of approximately $3,300,000. Brown Trailer will build 350 dry vans; Trailmobile will build 100 insulated trailers and 50 refrigerator trailers insulated by the foamed-in-place process. The new units will replace 544 35-ft trailers now in service.

FOREIGN

► *Korean National Railroad.*—Will use proceeds of a $14-million loan from the International Development Association (an affiliate of the World Bank), to purchase 115 passenger-train cars and 800 coal cars, and to engage foreign consultants to assist in the establishment of a modern accounting and statistical system.

LOCOMOTIVES

► *New York, Susquehanna & Western.*—Has received from EMD three GP-18, 1,800-hp diesel-electric road switchers. Purchase price is covered by a government-guaranteed loan of $550,000.

► *Seaboard.*—Ordered 34 2,250-hp locomotives from EMD for service in new and faster freight schedules which the Seaboard is inaugurating, especially for its piggyback operations. The locomotives, to cost approximately $6,390,000, will be delivered between November and February. As part of the transaction, Seaboard will trade in 24 older 1,350-hp units.

(Continued on following page)

Market Outlook CONTINUED

New Facilities

► *New York City Transit Authority.* — The rebuilt Brooklyn Bridge — Worth Street station on the IRT Lexington Avenue line went into service Sept. 1. Cost of the project: $6,000,000.

► *Port Authority Trans-Hudson Corp.*—Plans a three-phase, $150-million rehabilitation and modernization program for the Hudson & Manhattan (Hudson Tubes), acquired by PATH Sept. 1. First phase, now under way, calls for cleaning and painting of all public areas, cleaning and re-lamping of existing cars, and extensive repairs to stairs, pavement, windows and fixtures. Second phase, which will take three to four years to complete, calls for designing and purchasing 250 air-conditioned cars "of the most modern concept"; completely rebuilding and renovating all stations; installing new utility systems, particularly the electric-power supply and distribution facilities; rehabilitating track and roadbed; installing new signals; building new maintenance shops and car yards. Third phase (which may overlap the second) calls for construction of a major transportation center at Journal Square Station, Jersey City; construction of transfer stations for interchange of passengers between the H & M and all New Jersey commuter roads; and construction of a new Hudson Terminal in Manhattan.

► *Sacramento Northern.*—Construction projects now under way or proposed include construction of 72-by-30-ft freight house and station facilities at Mulberry Yard, Chico, Calif., $76,000; installation of 1,100-ft drill track to serve industrial area east of Mulberry Yard, $50,000; rebuilding of 8,000-ft Fremont trestle on the Woodland branch, $388,000 (scheduled for completion in third quarter 1963); replacement of 330 track feet of 60-lb rail with second-hand 100-lb rail in Chico, $10,300. SN will also construct 2.5 miles of new track, abandon a 13,425-ft fill and trestle structure and build new overhead concrete structure in Sacramento to permit Yolo Port District to construct a deep-water channel from the Bay Area to West Sacramento. Yolo Port District will bear entire $450,000 cost of this project, which is scheduled for completion by the end of this year.

► *Wabash.*—Placed a $140,000 order with Motorola for 77 Motrac 64/12 volt two-way radios and 65 walkie-talkies. The 64/12-volt sets will be installed in diesel locomotives and the portable packsets will be used in cabooses. The packsets will operate from special dry battery packs that will operate from six months to a year in normal train service without replacement of batteries.

Maintenance Expenditures

► *Up 7.2% in Second Quarter.*—Expenditures by Class I roads for maintenance of equipment, way and structures in the second quarter of 1962 were up about $51 million, compared with the second quarter of 1961, according to report of AAR Bureau of Railway Economics summarized below:

	Second Quarter 1962	1961	% Change
Maintenance of Way and Structures	$307,842,555	$284,090,127	+ 8.4
Maintenance of Equipment	445,407,452	418,278,784	+ 6.5
Totals	$753,250,007	$702,368,911	+ 7.2

ORT, C&NW DIG IN

(*Continued from page 10*)

pressways," the commuters were making do (a well-heeled few "made do" by flying to work via Chicago Helicopter Airways, which operates shuttle flights between O'Hare Airport on the northwest side and a lakefront airstrip).

As the walkout ended its first week, the number of "interested parties" involved in the situation seemed to be growing. In the beginning, there were Labor Secretary Goldberg and Undersecretary Wirtz (who will succeed Mr. Goldberg in the top job), plus Chicago's Mayor Daley. By week's end, Messrs. Goldberg and Wirtz were staying in contact from long distance and Mayor Daley was conferring regularly with Mediator O'Neill. Meanwhile, mayors of a number of Wisconsin communities were calling for action to bring a settlement—and a group of suburban Chicago mayors and village presidents indicated they'd like to sit in on joint negotiating sessions.

Aside from a scattering of editorials—which, generally, regarded the strike as indefensible and urged that the union drop the freeze demand and negotiate protective conditions—the main issues at stake sometimes seemed to be getting lost in the confusion.

North Western did its best to make sure they didn't. Flyers distributed to commuters and advertisements in Chicago newspapers stressed the nature of the ORT demand. And North Western officers kept hammering away at the point that a job freeze would stymie railroad efforts to take advantage of technology to modernize operations.

Thus far, there are no indications of any splintering of union solidarity in the strike. The non-operating unions —almost all of them involved in job stabilization moves of one kind or another—are apparently looking to the Telegraphers to lead the fight to fix employment levels. And the operating crafts—particularly the Firemen—also have something of a stake in the stabilization battle. (The ops' own fight with the carriers—over the work rules dispute—was moved off the front burner last week, as both sides looked toward a court-imposed Sept. 18 deadline for filing initial briefs in appeals from District Court rulings which tossed out the unions' case but enjoined the carriers from changing rules pending a union appeal. Both rulings have been taken to the U. S. Court of Appeals in Chicago.)

People in the News

John P. Hiltz, Jr.
D&H

Alfred W. Hesse, Jr.
Reading

ATLANTIC COAST LINE.—**J. W. Flowers,** division superintendent, Augusta, Ga., promoted to assistant to vice president at that point, reporting jointly to the vice president of traffic and the vice president of operations.

Carlos Castro, Jr. appointed foreign freight agent, New York.

BALTIMORE & OHIO.—**Bernard F. McNally** appointed district sales manager, Philadelphia, Pa., succeeding **Edward F. Kenna,** retired. **Clarence H. Dick,** district sales representative, Kansas City, Mo., appointed division sales manager, Wheeling, W. Va.

Joseph H. Flanigan, freight representative at Seattle, Wash., appointed sales representative, Spokane, Wash.

BURLINGTON.—**E. B. Burnside,** general freight agent in charge of sales and service, Colorado & Southern, appointed general freight agent, Burlington, Denver, succeeding **C. D. McIntosh,** retired.

DELAWARE & HUDSON.—**John P. Hiltz, Jr.,** vice president — operations, maintenance, purchasing, stores, real estate and industrial development, elected president and general manager, with headquarters remaining at Albany, N.Y. **William White,** who has been chairman and president, will continue as chairman and as chief executive officer. Mr. White also will continue as chairman and president of the parent company, the Delaware & Hudson Co., at New York.

GULF, MOBILE & OHIO.—**William Jackson Edwards, III,** appointed a general attorney, Mobile, Ala.

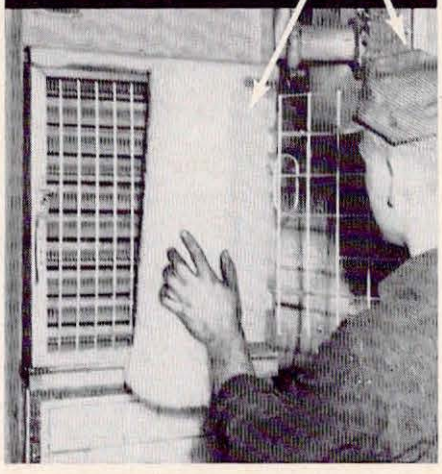
ILLINOIS CENTRAL.—**Allen L. Sams,** principal assistant engineer, Chicago, advanced to the newly created position of assistant chief engineer.

LEHIGH VALLEY.—**M. J. Durr.** export-import agent, New York, promoted to foreign freight traffic manager there, succeeding **A. K. Thomas,** who retired Aug. 31. **G. E. Bartley,** general agent, St. Louis, Mo., promoted to assistant freight traffic manager, Pittsburgh, Pa., succeeding **T. F. Williams,** promoted (RA, Sept. 3, p. 21). **J. J. Medley** promoted to export-import agent, succeeding Mr. Durr. **M. D. Brinker,** commercial agent, Toledo, Ohio, succeeds Mr. Bartley at St. Louis. **M. J. Kavanagh.** commercial agent, Boston, Mass., promoted to general agent there, succeeding **E. C. Long,** retired.

MIDLAND CONTINENTAL.—**S. A. Eddy,** general agent, Minneapolis, Minn., retired Sept. 1.

MISSOURI PACIFIC.—**A. W. Rees,** assistant superintendent, Eastern division, Nevada, Mo., appointed superintendent, Omaha division,

AAF AMER-kleen air filters do a better job at lower cost on engine intakes and carbodies



NOW INSTALLED ON 29 RAILROADS . . .

On-the-job operation in locomotives has clearly demonstrated these three major competitive benefits of AMER-kleen replaceable glass fiber filters:

1. **LOWER INITIAL COST.** The cost of metal panel filters is at least 70% more than for AMER-kleen retaining frames.
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AAF makes all three types of filters used in engine intake and carbody service – metal, oil bath and AMER-kleen. We **recommend** AMER-kleen, and we think you'll **demand** AMER-kleen when you know all the facts. Write: J. K. Sparrow, Engine & Compressor Dept., American Air Filter Company, Inc., 111 Central Avenue, Louisville, Kentucky.

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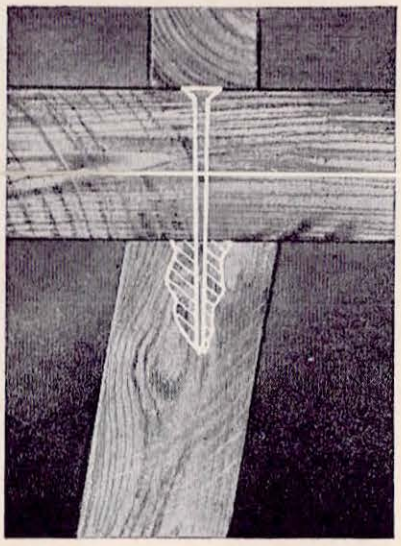

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The area surrounding drift pins and bolt holes is only one of the many possible decay spots which are hazards to the safety and service of timber bridges and trestles — and which can lead to costly replacements. And there's one best way to solve all these problems — OSMOSE Bridge Inspection and Treatment!

Not only do you get thorough, expert examination and evaluation, from groundline of pilings to caps and stringers, but effective, in-place treatment that can double the expected service life of your wooden structures.

It will pay you in all ways to find out about the exclusive Osmose method. Find out, also, how amazingly moderate is the cost of keeping your older bridges in place, safe and sound. At no obligation, write: Bridge Inspection and Treatment Division, Osmose Wood Preserving Co. of America, Inc., 981 Ellicott Street, Buffalo 9, New York.

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Atchison, Kans., succeeding **C. L. Christy,** retired. Mr. Rees' successor is **R. L. Caldwell,** trainmaster, Poplar Bluff, Mo., who in turn is replaced by **J. B. McCormack,** transferred from the Little Rock Terminal, North Little Rock, Ark. **J. M. McJannet,** assistant trainmaster, San Antonio Terminal, San Antonio, Tex., replaces Mr. McCormack.

Walter R. Weaver appointed assistant general freight agent—divisions, St. Louis, Mo.

NEW JERSEY, INDIANA & ILLINOIS.—Arthur J. Walters, sales representative, Wabash, Detroit, appointed general freight agent and assistant superintendent, NJI&I.

NICKEL PLATE.—Lewis O. Ward, general agent, Muncie, Ind., retired Aug. 31.

H. A. Gilmore, general agent, Minneapolis, Minn., appointed assistant general freight agent, New York, succeeding **Arthur J. Hellstrom,** retired (RA, Aug. 20, p. 35). **W. Dave Nelson,** general agent, Davenport, Iowa, succeeds Mr. Gilmore at Minneapolis.

NORFOLK & WESTERN.—James W. Taylor, traveling freight agent, Charlotte, N.C., appointed district freight agent, Portland, Ore., succeeding **Lester C. Thompson, Jr.,** named general agent, Minneapolis, Minn. Mr. Thompson replaces **Frank R. Broaddus,** retired.

NORTHWESTERN PACIFIC.—Will G. Crocket, district freight agent, San Francisco, retired Aug. 31.

PIEDMONT & NORTHERN.—D. H. Edwards, Jr., assistant general freight agent, **Seaboard,** Richmond, Va., appointed general freight agent, **Piedmont & Northern,** Charlotte, N.C.

READING.—Effective Sept. 16, the freight traffic department will be reorganized into a freight sales department and a marketing department. **Thomas H. Ramsey,** vice president—freight traffic, named vice president—freight sales. **Alfred W. Hesse, Jr.,** general attorney, will be vice president—marketing.

SANTA FE.—Clarence R. Tucker, vice president-operations, Chicago, retired Sept. 1. He will continue as a member of the board of directors.

R. D. Bisbee returned to the position of division engineer, Slaton division, Slaton, Tex., replacing **B. L. Pritchard,** acting division engineer (RA, June 18, p. 39).

SEABOARD.—J. N. Spencer, commerce agent, named assistant general freight agent, Richmond, Va., succeeding **D. H. Edwards, Jr.,** appointed general freight agent, **Piedmont & Northern,** Charlotte, N.C.

SOUTHERN PACIFIC.—Clarence D. Fabrin, manager of the time service bureau, retired Aug. 31.

A. M. Henson appointed trainmaster, Sanderson, Tex.

The following appointments have been made at San Francisco: **A. M. Collins,** assistant auditor of revenue accounts; **J. D. Hammer,** assistant to income tax auditor; **M. O. Jones,** assistant auditor of disbursements; and **W. L. Lane,** assistant auditor of miscellaneous accounts.

STATEN ISLAND RAPID TRANSIT.—Irving W. Doty appointed district sales manager, succeeding **William J. Buck.** Mr. Doty will continue to be located at 130 Bay Street, Staten Island 1, New York.

WABASH.—A. D. Thorp, assistant district sales manager, Cleveland, named district sales manager, Minneapolis, replacing **P. D. Donahue,** appointed to the newly created position of sales manager, St. Louis. Mr. Thorp's successor is **L. E. Caldwell,** district sales manager, Toledo, Ohio. **T. W. Hess,** chief clerk, Philadelphia, appointed sales representative, Boston, to succeed **R. T. Bevans,** advanced to the newly created post of district sales manager, Detroit. **A. L. Klein,** sales representative, Kansas City, Mo., appointed sales manager, Des Moines, Iowa.

WESTERN MARYLAND.—The following title changes were effective Sept. 1: **J. S. Eaton,** from assistant general purchasing agent to purchasing agent. **F. H. Ansel.** from superintendent of stores to manager of stores.

Supply Trade

James A. McNiven has been appointed service engineer, **Primary Battery Division, Thomas A. Edison Industries** of **McGraw-Edison Co.,** at Metairie, La. Mr. McNiven will cover a number of railroads now under jurisdiction of the St. Louis district office, reporting to **Joseph E. Drennon,** district manager. He was formerly with the U.S. Coast Guard in New Orleans, La.

Frank B. Uhrbrock, former assistant to superintendent of transportation, **Norfolk & Western,** has joined **Ford, Bacon & Davis, Inc.,** New York engineering, construction and management consulting firm, as an analyst in the valuation and reports department.

William J. Bolte, general counsel, **ALCO Products, Inc.,** New York, also has been elected vice president and secretary. As secretary, Mr. Bolte succeeds the late **Carl A. Sundberg** (RA, Aug. 20, p. 36).

Edward C. Kavanaugh has been named assistant vice president of **Griffin Wheel Co.,** Chicago based subsidiary of **Amsted Industries Inc. Roger H. Rosen,** assistant chief engineer, succeeds Mr. Kavanaugh as chief engineer.

C. W. Lindrose has been appointed manager of the new Electro-Mechanical Products Section, **Industrial Battery division, Gould-National Batteries, Inc.,** St. Paul, Minn.

Franklin Container Corp., Philadelphia, Pa., has named **J. C. Wilson, Ltd.,** 5435 Ferrier Street, Montreal, and its eight branches as the first distributors in Canada for "Avi-Gard" Barrier material. **Ratcliff Paper Co.,** a Wilson unit at 1 Dartnell Avenue, Toronto, will be the distributor in that area. Wilson branches are at Quebec City; Kitchener and Windsor, Ont.; Winnipeg, Man.; Regina and Saskatoon, Sask.; and Victoria, B.C.

James M. Roche has been elected an executive vice president of **General Motors Corp.,** with jurisdiction over the Engine Divisions, the Dayton, Household Appliance and Electro-Motive group, and the Overseas and Canadian group. Mr. Roche succeeds **Cyrus R. Osborn,** who retired Aug. 31. **Kenneth E. Staley** succeeds Mr. Roche as vice president in charge of the distribution staff.

OBITUARY

W. C. Carrick, 79, retired comptroller, **Richmond, Fredericksburg & Potomac,** died Aug. 25 at Richmond, Va., after a long illness.

Edwin R. Eckersall, 54, vice president and special counsel, **Milwaukee Road,** died Sept. 4 at Evanston (Ill.) Hospital.

Walter J. Plogsted, who retired ten years ago as vice president—export of the **General Railway Signal Co.,** died Aug. 25 at his home in Clearwater, Fla.

YOU OUGHT TO KNOW

Greater highway safety through reduction of accidents resulting from driver fatigue is the objective of new ICC safety rules which went into effect Sept. 5. The new rules limit maximum hours of service for drivers of commercial buses and trucks, including private trucks engaged in interstate commerce.

Local interests in northwestern New Jersey are proposing to take over, rebuild and operate a 9.5-mile segment of the abandoned Lehigh & New England between Augusta and Sussex. The line, under the proposed name, Black River & Western, would connect with the Erie-Lackawanna at Augusta and handle freight between that point and Sussex. The proposed financing involves $100,000 in stock and $186,000 in bonds.

Illegal highway operations resulted in fines totaling $75,000 during this year's second quarter, reports the Committee Against Unlawful Transportation (CAUT). The penalties, arising out of court cases instituted by the ICC, were paid by 73 truckers, 13 shippers and one bus company. The violations occurred in 22 states. Carrier fines ranged from a low of $100 to a high of $5,000, and averaged $850. Shipper fines ranged from $2 to $4,200, and averaged $1,000.

L&N President W. H. Kendall will be the keynote speaker at a meeting of the Railroad Section, National Safety Congress, at Chicago's La Salle Hotel, Oct. 30-31. Panel discussions will be held on "Underlying Principles of Training as It Affects Safety," "Supervisory Training as Applied to Safety," "New Frontiers in Grade Crossing Safety," and "Employee Training as Applied to Safety." The railroad sessions will be part of the annual National Safety Congress and Exposition, extending from Oct. 29 through Nov. 2.

Reduced air-freight rates on specific commodities moving on specific routes have been announced by Flying Tiger Lines. Experimental reductions ranging from 11% to 46% are designed to "bring an increased volume of freight into air transportation." Among commodities and points covered: seafood between Seattle and San Francisco; baggage from San Francisco, Seattle or Portland to New York; drugs from Los Angeles to Boston and Philadelphia.

Winter annual meeting of the Railroad Division, American Society of Mechanical Engineers, will be held in New York Nov. 28-29. It will include a symposium on "Freight Car Truck Design" presented by a panel made up of a railroad chief mechanical officer, and representatives of a carbuilder, a car-truck manufacturer, and the AAR Freight Loss and Damage Prevention Section.

N&W's first unitized coal train rolled into South Amboy, N.J., at 3:20 a.m. Aug. 30, 19½ hours after beginning its test through run from Roanoke, Va. (RA, Sept. 3, p. 10). N&W President S. T. Saunders called the experimental movement of 110 carloads of coal "highly successful" and asserted: "Innovations such as these will keep the railroads competitive with other forms of bulk cargo transportation."

"To study the various aspects of complicated transportation issues" as they affect the grain and feed industry, the Grain and Feed Dealers National Association has appointed a new Transportation Committee. It is headed by Robert Parrott, executive vice president of Central Soya, Ft. Wayne, Ind. Preliminary studies indicate general agreement in opposition to any measure of transport nationalization; opposition to Section 22 rates for exclusive government use; support of grain transit arrangements; and need for a "transport system and policy which encourages efficient functioning and operation of established commodity futures markets."

(Continued on following page)

GM Gives $75,000 for Transportation Library

A check for $75,000 is presented by Cyrus R. Osborn (second from left), executive vice president of General Motors Corp., to William S. Kerr, vice president and business manager of Northwestern University. The grant, made by GM in the name of its Electro-Motive Division, was announced at a retirement luncheon honoring Mr. Osborn in Chicago Aug. 31. It will be used to provide a building and equipment for Northwestern's Transportation Center Library. Looking on are Richard L. Terrell, left, vice president of GM and general manager of EMD, and Frank Kreml, director of the Transportation Center.

YOU OUGHT TO KNOW CONTINUED

Railroad sales, which accounted for 90% of the total revenues of AMSTED Industries in the years following World War II, now account for only 50%, according to President Joseph B. Lanterman. He commented that "company expansion rather than de-emphasis of our railroad product lines" was responsible for the change. Mr. Lanterman made the comparison in announcing AMSTED's latest diversification move—acquisition of the Johnson Machine and Press division of Bontrager Corp., Elkhart, Ind.

Rising demand for TOFC service has led Atlantic Coast Line to put a new all-piggyback train into operation from New York City (Kearny, N.J.) to Tampa, Fla. Beginning Sept. 14, the train will leave Kearny at 11 p.m. and arrive Tampa at 7 a.m. the second morning—fastest schedule ever offered, according to J. W. Plant, ACL manager trailer train service. It will pick up trailers at such intermediate points as Philadelphia, Baltimore and Alexandria, Va. Delivery points will include Jacksonville and Orlando, Fla.

Despite carbuilding losses in fiscal 1962, "the overall potential is of sufficient promise to warrant our continuing aggressively to maintain and improve our position in the freight and tank car manufacturing business," says ACF Chairman William T. Taylor. ACF's continuing objective, according to Mr. Taylor, is "to grow in all profitable areas of its equipment leasing and manufacturing competence, and to reach the point at which a bad railroad carbuilding year need no longer mean famine, while a good carbuilding year can mean something of a feast." For its first fiscal quarter (the three months ended July 31), ACF reported consolidated net earnings of $1,952,000, compared with $435,000 in the first fiscal quarter of 1962.

The non-op settlement in Canada has been unanimously ratified by the 115-member general conference committee of the 15 bargaining unions. The settlement, ending a long wage and job-security dispute, is based on a Conciliation Board's recommendations (RA, Aug. 20, p. 30).

Freight car journal performance, which reached a record-setting 1,028,990 miles per setoff in April 1962, dropped to 962,642 miles per setoff in May—still almost 94,000 miles higher than the next best previous monthly figure. Summary of member-road performance for May, compiled by the AAR Mechanical Division, showed 2,135 setoffs of pad-equipped cars and 667 of waste-packed cars. Roads with best May records were Norfolk & Western (3,608,941 miles) and Central of Georgia (3,076,584 miles).

Class Rates Wrongly Charted

In the article "Why the Class-Rate System Is Anti-Economic" (RA, Aug. 27, p. 42) several of the various class rates were charted in comparison to a suggested "tentative optimum railroad rate." These class rates were erroneously taken from an out-of-date tariff—hence were shown at somewhat lower cents-per-100-lb than the rates actually in effect today.

This inaccuracy as to detail does not detract from the main point of the article, viz., that there is no class rate, whatever its percentage, which parallels or bears any close relationship to what a rate progression would be if constructed to be economically competitive. In general, all class rates tend to be much higher than a reasonably effective competitive basis would be, in the shorter hauls; and considerably lower than competition usually requires, in the longer hauls.

"Hi-Hat" plain journal bearing and wedge, developed by AAR Research Center, has been authorized by the Mechanical Division for application to 10,000 interchange freight cars. Sloping sides of the present standard "steeple-back" bearing are replaced with vertical surfaces which interlock with the wedge, forming an assembly that has proved to be much more stable under coupling impacts. The AAR Research Center expects that the greatly improved plain bearing performance which railroads have been experiencing in recent months will be improved still further when large numbers of "Hi-Hats" are in service. Three roads have already placed orders for the new type.

"Transportation Man of the Year" award of Delta Nu Alpha will be presented to William B. Johnson, president of REA Express, during the transportation fraternity's annual conference at Buffalo, N.Y., Oct. 20. Mr. Johnson will be cited for his "outstanding contribution to the advancement of the traffic and transportation profession."

Rapid transit will be an issue at Georgia polls in the Nov. 6 general election. A constitutional amendment that would permit any Georgia county to engage in mass transportation will go before the voters. Approval would clear the way for Atlanta's Rapid Transit Study Commission to proceed with plans for a rapid-transit system for the Atlanta metropolitan area. A statewide campaign will be waged during the month of October to whip up support for the amendment.

General American has purchased American Machine & Foundry's Mechanics Research Division at Niles, Ill. Spencer D. Moseley, General American's president, said the move would permit GATC to "broaden and intensify its efforts and capabilities in the areas of research and development." MRD has specialized in advanced programs in mathematics and physics and has conducted applied research studies and design in such fields as heat transfer, environmental control, automation and automatic controls.

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Actually poor, potentially prosperous. That is the railroad situation today. It won't stay right where it is either. It will either get much worse or a great deal better — soon. The way things turn depends largely upon the degree to which the American people understand their stake in railroad growth and health; and the necessary steps to that end.

What the public's attitude is will be determined by the confidence railroaders inspire by the way they do business in the coming months; and in their skill in awakening the interest of opinion leaders.

The assignment is big and hard enough to call for all the dedication and genius of which railroaders are capable. Big goals which need to be attained in the immediate future include:

1. *Changes in operating employees' working rules*: Railroads cannot survive as self-supporting private enterprises with the kind of subsidized competition to which they are subjected, while at the same time continuing in today's diesel era the piecework standards of the age of steam.

For train crews a "day" is 100 train-miles now, just as it was 40 years ago. What other industry but the railroads has ever maintained piecework standards unchanged, after the installation of vastly more productive (and more costly) machines? The vast majority of railroad employees are not included in this obsolete arrangement, but they suffer from the resulting competitive erosion of traffic and jobs. The answer to this problem will not come out of emotional public debate. Instead, it needs statesmanship of the highest order, not only on the part of managements and union leaders, but on that of responsible citizens and government officials as well.

Somehow ways must be found to reduce the sharpness and frequency of conflicts between railroad managements and unions. The two groups have more interests in common than they do in conflict; and it is irrational and absurd that there should be so much acrimony in their relationships.

2. *Securing enactment of President Kennedy's transportation program*: The President has called for legislation which, if enacted, would remove possibly about half the political handicaps under which railroads are operating. His most important recommendation is that which would give railroads freedom from regulation of minimum rates on bulk and agricultural commodities. Such legislation would enable railroads to compete successfully for a considerable volume of traffic now denied to them. This legislation is the very minimum requirement to put an end to the continuing erosion of railroad traffic.

3. *Mergers*: Not all proposed railroad mergers are possible, because railroads themselves are not in full agreement as to what they ought to be. But some mergers there must be — to increase the inherent service and cost advantages of mass-produced transportation. Those who oppose mergers must be brought to realize that the alternative to several smaller mergers will almost certainly be, not an end to mergers, but one big merger, under government ownership. At the same time, protagonists of mergers must not neglect to make it clear that mergers alone will not solve all the railroads' problems.

4. *Clearer understanding of costs:* Several cases are now in litigation, wherein the effort is being made to force railroads up to the artificially high level of what is known as "fully distributed costs" in pricing their service. If this kind of pricing obtained in the merchandising business, a merchant would have to charge not less than a proportionate rate of profit on every item sold. There could be no "sales." If suits would not sell for $100, the merchant would have to destroy them rather than mark them down to $50. Every merchant in the country would go broke fast under such regulation — and so will the railroads, if it is fastened on them.

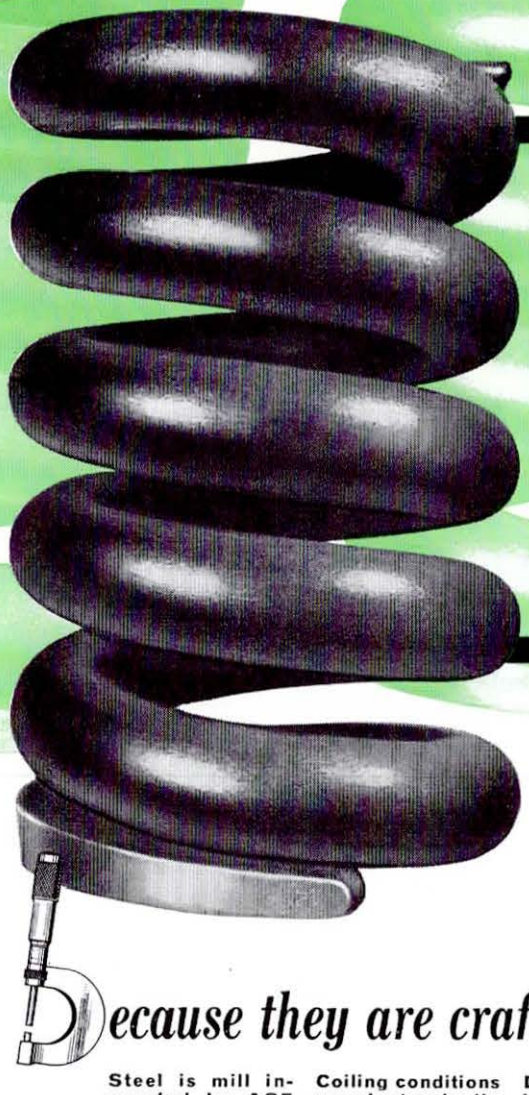
The regulators and courts and government authorities in legislative and executive departments can be expected to understand the complexities of railroad costing problems only to the degree that railroad people themselves will master these complexities, and elucidate them clearly to public officials. Few railroad men know as much about these problems as they should—and as litigants they *must*, if a disastrous "umbrella rate" level is not going to be fastened on the industry.

●

This list of goals that railroad leadership must attain, and soon, to avoid disaster could perhaps be extended to embrace others of almost equal importance and immediacy. But further listing isn't necessary, because if the foregoing four are secured, the resulting momentum will quickly encompass others.

The real goal is to get earnings up to the point where railroad investments look as attractive to investors as investments in utilities and the manufacturing industry do.

Inherently, railroads are so strong economically and technologically that just a modicum of fair treatment will enable them to go a long way upward, and fast. Getting that modicum of improved treatment is the assignment now before railroad leaders. We expect they will make the effort, and that they will succeed.



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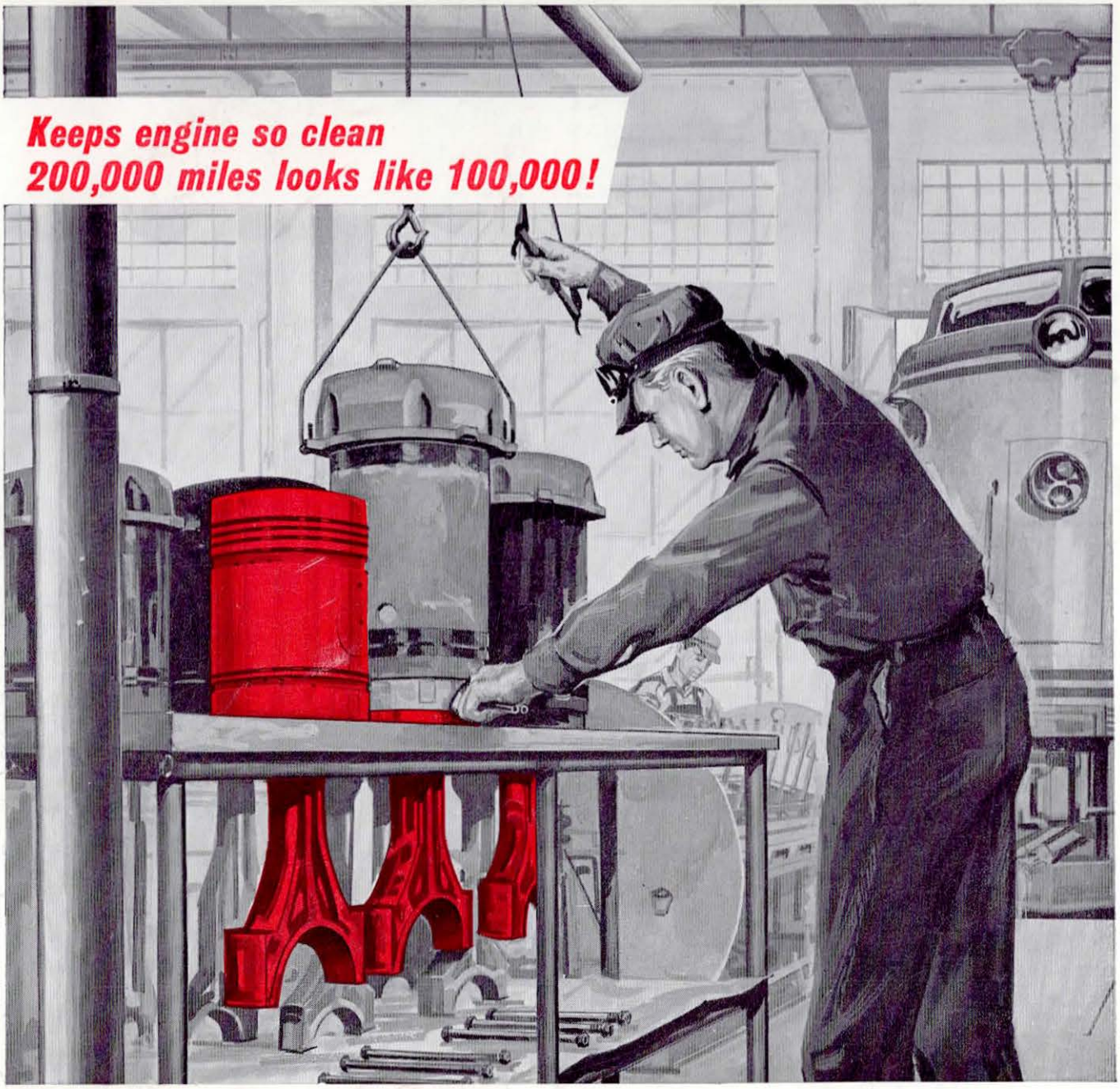

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